'85 ontario road safety annual report

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Ontario

Ministry of
Transportation and
Communications

'85 ontario road safety annual report

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minister's message

Ed Fulton

It is my pleasure to introduce the first edition of the new Ontario Road Safety Annual Report. This report is the product of discussion and consultation with the many users of the Motor Vehicle Accident Facts book, which this publication replaces.

In 1985, 1,191 persons were killed in motor vehicle accidents and this number represents an increase of 5.2 per cent over 1984. Although it is sometimes misleading to try to assess whether the highway safety problem is becoming worse simply in terms of what happened the year before, it is always disturbing to see increases in the number who have lost their lives on our roads. All of us are saddened by the sometimes tragic consequences of accidents and we are constantly trying to find better ways to help understand and resolve the problem. One way this new publication will help is to place more emphasis on five- and ten-year trends thereby giving us new insights into both encouraging and discouraging changes.

The new report is organized into eight concise units, each of which addresses a certain aspect of motor vehicle safety. As well, most units contain commentary to highlight and discuss the significance of the statistics and trends illustrated in the figures and tables. A general synopsis of the state of highway safety in Ontario is also included in the overview section.

One specific area of safety concern is drinking and driving. Since 1981, there has been nearly a 20 per cent decline in the number of drivers killed who had been drinking. This drop has come about as the result of comprehensive public education, new legislation and enforcement campaigns. Yet, despite these ongoing efforts, impaired drivers and their innocent victims are killed on Ontario roads every year. In 1985 again, nearly half of the drivers killed had been drinking or were impaired.

In 1986, my ministry will continue its efforts to prevent accidents and reduce the number of deaths and injuries. However, it is you, the Ontario driver, who can effect the largest improvements in road safety by adhering to the laws and exhibiting common sense and courtesy.

Ed Fulton

Ed Fulton
Minister of
Transportation and Communications

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1 overview

1a. synopsis

In 1985, there were 1,191 persons killed in motor vehicle accidents in Ontario and a further 109,169 persons were reported injured. Of the persons killed, 603 were drivers, 357 were passengers, 182 were pedestrians, 97 were motorcycle drivers, 24 were motorcycle passengers and 50 were other types of road users.

The age group with the most deaths was 20-24 year olds (284). Next largest was 16-19 year olds (164). Of those killed, 101 were under 16 years of age.

Among those drivers killed who were tested for alcohol, 206 (34.0%) were legally impaired, and an additional 79 (13.1%) had consumed some alcohol but were not considered impaired.

There were 189,750 accidents involving 352,184 separate vehicles reported in 1985. Of these accidents, 1,036 resulted in at least one person being killed and an additional 73,840 resulted in some personal injury.

Approximately five per cent of Ontario drivers and about seven per cent of Ontario vehicles were involved in accidents in 1985.

Selected Statistics	
Total Reportable Accidents	189,750
Fatal Accidents	1,036
Personal Injury Accidents	73,840
Property Damage Accidents	114,874
Persons Killed	1,191
Drivers Killed	603
Drivers Killed (Impaired or Had Been Drinking)	285
Passengers Killed	357
Pedestrians Killed	182
Other Road Users Killed	50
Persons Injured	109,169
Estimated Ontario Population (1985)	9,066,000
Licensed Drivers	5,660,422
Registered Vehicles	5,218,392
Estimated Vehicle Kilometres Travelled (in millions)	67,831
Estimated Property Damage	$547,518,951
Number of Persons Killed in Motor Vehicle Accidents per 100,000 People in Ontario	13.1
Number of Persons Killed in Motor Vehicle Accidents per 100 Million Kilometres Travelled	1.8
Accident Rate per 100 Million Kilometres Travelled	280.0
Fatal Accident Rate per 100 Million Kilometres Travelled	1.5

1b. selected characteristics of motor vehicle accidents in 1985

Persons Killed

Since 1972, there has been a general downward trend in the number of persons killed in motor vehicle accidents, although some year-to-year fluctuations have occurred. The last marked drop occurred between 1981 and 1982. Since 1982, the yearly number of deaths has varied in the 1,100 to 1,200 range.

There are many reasons for the decline in persons killed. Economic factors, improved vehicle design, increased seat belt use, reduced highway speed, enhanced highway design, increased popularity of driver education, improvements in medical treatment and the increasing average age of the driver population probably have all contributed to the improvement.

Persons Injured

The picture for injuries is less clear. Over time, the total number of reported injuries per year has been gradually increasing, with a particularly sharp increase occurring in 1985. Looking more closely at the three levels of injury severity reveals additional information. Reports of minor and major injuries have remained fairly stable, but reports of minimal injury have increased, particularly in 1985. The numbers of minor and major injuries reported in 1985 are similar to the numbers reported during the late 1970s; however, the number of minimal injuries in 1985 is substantially larger than found in the late 1970s. The reasons for this difference have not yet been investigated but changes in reporting practices provide one possible explanation.

Fatal Accidents

Fatal accidents make up only a small proportion of all accidents but they tend to have characteristics which make them different, apart from their tragic consequences. Fatal accidents are more likely to occur at night between the hours of 6 p.m. and midnight. Drivers in fatal accidents are more likely to have been drinking and to have been driving too fast. The fatal accident is more likely to occur in the summer months and to involve a single vehicle.

Male and Female Drivers

Although today most women as well as most men obtain their driver's licence and more women are making active use of that licence, male drivers still predominate in accidents. Males make up 56 per cent of the driver population but represent 72.9 per cent of all drivers involved in accidents and 81.9 per cent of the drivers involved in fatal accidents.

Driver Action

Speeding and failing to yield the right-of-way remain the most frequently noted errors committed by drivers involved in all accidents and particularly in serious accidents. Speeding is also the most frequently recorded Highway Traffic Act offence.

1c. areas of highway safety concern

Motor Vehicle Occupants Versus Non-Occupants

The declines seen in the overall number of persons killed are primarily the result of fewer deaths among vehicle occupants (drivers and passengers). Because vehicle occupants are the largest group of persons involved in accidents, changes in this group tend to have the largest effect on the total. Non-occupants as a group (e.g. motorcycle drivers and passengers, bicyclists and pedestrians) have not shown similar declines in persons killed or in reports of major and minor injuries.

Accident Prevention Versus Severity Reduction

Because of changes in the minimum reporting level for property damage accidents it is difficult to make precise comparisons of accident totals across years. Nevertheless, while the severity of accidents has been reduced, the total number of accidents appears not to have declined.

Reporting of Accidents

The Highway Traffic Act, Motorized Snow Vehicles Act and Off-Road Vehicles Act set out criteria for the accidents that must be reported. Some accidents are not reportable even though they may have occurred on the roadway (e.g. falls from bicycles) or may have involved motor vehicles (e.g. property damage accidents in parking lots).

Missing from the information base are accidents that fall under the jurisdiction of the three Acts but are not reported to the police by the parties involved. This non-reporting results in a deflation of the statistics and may mask potential problem areas. Off-road vehicle, snow vehicle and low severity accidents involving injury are types of accidents which are thought to be under-reported.

Injury Costs

One aspect of motor vehicle accidents that is difficult to ascertain is their total associated cost. Data provided by the Ministry of Health indicate that persons injured in motor vehicle accidents spent 147,301 days in hospital in 1984. At an estimated average of $251. per day, hospital costs represent about $37,000,000. An additional two or three times this amount in associated medical fees also results from accidents.

Of course this is only a partial accounting of costs. Also relevant are the costs of long term disability, productive time lost and secondary costs to friends and family, to give only a few examples. Even the total non-fatal injury costs represent only a portion of the total losses, as they do not reflect fatality and property damage costs.

Driver Condition

By far the largest single factor contributing to traffic accidents is alcohol abuse. Approximately half the drivers killed each year had been drinking. However, in recent years some indications of improvement have appeared. For the past two years slightly more of the drivers killed were reported "normal" than were alcohol involved. In addition, examinations of the drivers killed in December-January have shown a sharp decline in alcohol involvement starting in 1983/84. Most drinking/driving occurs in the summer months, however, and there is much room for improvement.

■

Young Drivers

Young and inexperienced drivers remain a concern to those responsible for accident prevention. Drivers 16 to 19 years of age are over-represented in accidents relative to their numbers in the total driver population. Whether this over-representation is the result of less skill and experience or because of attitudes which lead to more risk-taking is widely debated. Additional factors weighing against young drivers are that they do a greater proportion of their driving in the more hazardous nighttime and weekend periods than other drivers; they often carry large numbers of potentially distracting passengers; and they are more likely to be driving vulnerable vehicles, *i.e.* motorcycles. The scenario of a nighttime accident involving a young, drinking driver going too fast and crashing with a vehicle full of passengers is repeated too often each year.

Older Drivers

There has been concern expressed about the aging of Ontario's population and the potential effects on highway safety. Projections regarding the numbers of elderly persons who will continue to drive suggest that this group should receive long term attention in highway safety research. One issue is the definition of "elderly" for highway safety purposes. Older drivers do seem to be over-represented in accidents but only in the late seventies and older age groups.

Pedestrians

Pedestrian safety programs are often directed only at young pedestrians. However, there are really three groups of accident-involved pedestrians, each with its own characteristics. Young pedestrians run into traffic without looking or come from behind parked cars. Pedestrians in the 16 to 65 age group frequently had been drinking prior to accidents. In 1985, 28.6 per cent of all pedestrians killed were alcohol involved. Research on pedestrians who had been drinking has shown that they have blood alcohol concentrations substantially higher than the BAC usually found in drinking drivers. Lastly, elderly pedestrians also form a significantly different group, perhaps because they may be physically less agile and because they are more likely to die when injured.

2 the people

2a. people in accidents

Table 2.1 Category of Involved Person by Severity of Injury 1985

Category of Involved Person	Severity of Injury					Total
	None	Minimal	Minor	Major	Fatal	
Driver	268,622	34,130	18,055	3,674	502	**324,983**
Passenger*	179,515	20,207	12,962	2,548	333	**215,565**
Pedestrian	294	1,999	2,977	1,123	182	**6,575**
Bicyclist	115	2,318	2,012	334	43	**4,822**
Moped Driver	—	10	15	3	1	**29**
Motorcycle Driver	864	1,957	2,393	977	97	**6,288**
Motorcycle Passenger	200	307	455	158	23	**1,143**
Other	7,009	229	175	151	10	**7,574**
Total	**456,619**	**61,157**	**39,044**	**8,968**	**1,191**	**566,979**

*Includes Bus Passengers

For all persons involved in accidents, 86.5% had no injuries, 10.8% had minimal injuries, 6.9% had minor injuries, 1.6% had major injuries and 0.2% had fatal injuries.

Figure 2.1 Persons Killed 1977-1985

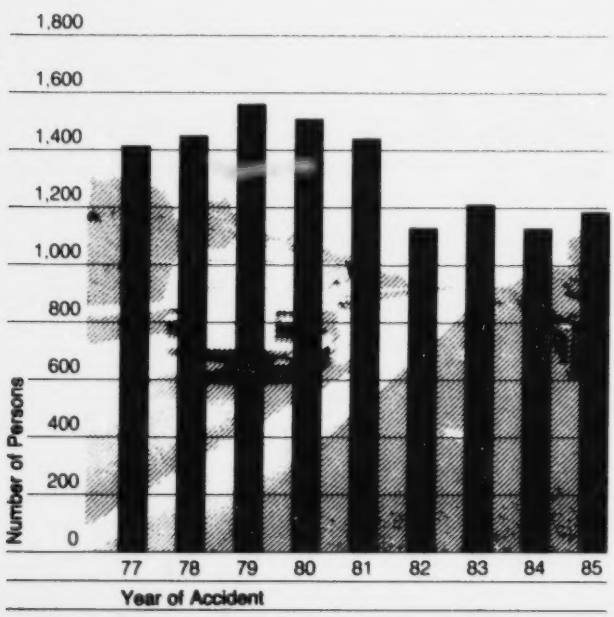


Table 2.2 Category of Persons Killed by Age Groups 1985

Category of Persons	Age Groups 0-4	5-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-74	75+	UK	Total
Driver	—	1	7	8	13	20	26	84	103	91	49	41	36	23	—	**502**
Passenger	12	38	15	18	15	15	9	43	42	23	23	30	30	19	1	**333**
Pedestrian	5	21	5	4	6	3	3	8	28	14	13	20	20	32	—	**182**
Bicyclist	3	16	2	3	2	1	1	3	2	1	1	2	—	4	2	**43**
Moped Driver	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	**1**
Motorcycle Driver	—	—	2	5	7	4	7	38	19	6	3	4	2	—	—	**97**
Motorcycle Passenger	—	—	—	2	3	1	3	7	3	2	—	2	—	—	—	**23**
Other	—	5	2	—	—	—	1	1	—	1	—	—	—	—	—	**10**
Total	**20**	**81**	**33**	**40**	**46**	**44**	**50**	**184**	**197**	**138**	**89**	**99**	**89**	**78**	**3**	**1,191**

Figure 2.2 Persons Injured and Severity of Injury 1977-1985

In 1985, the number of minor and major injuries remained relatively unchanged from previous years. However, growth within the minimal injury category accounted for a large rise in the total number of injuries.

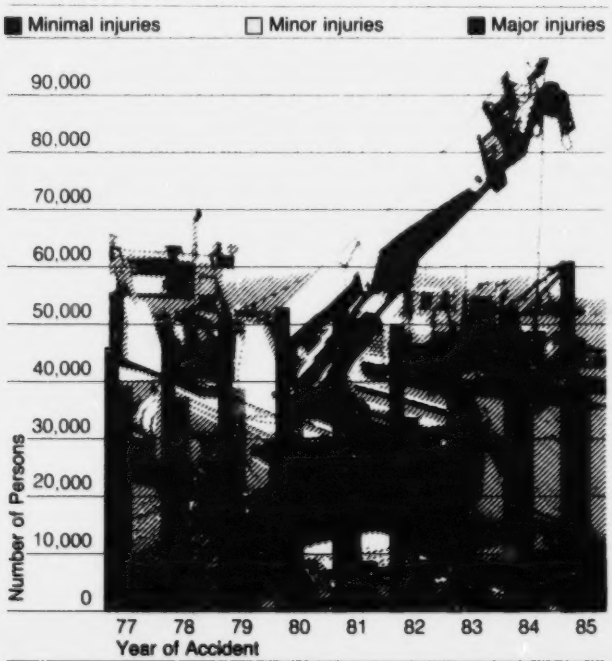


Figure 2.3 Per Cent of Total Persons Killed by Age 1985

Approximately 40% of persons killed were under 25 years of age (41.8%)

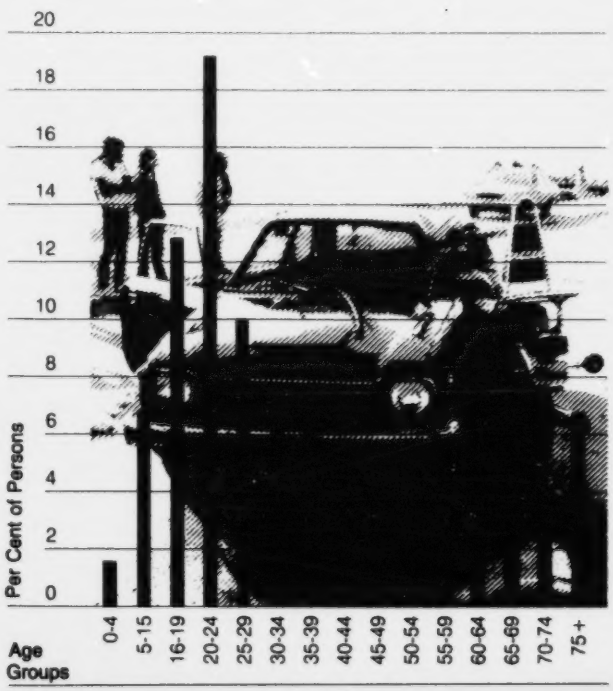
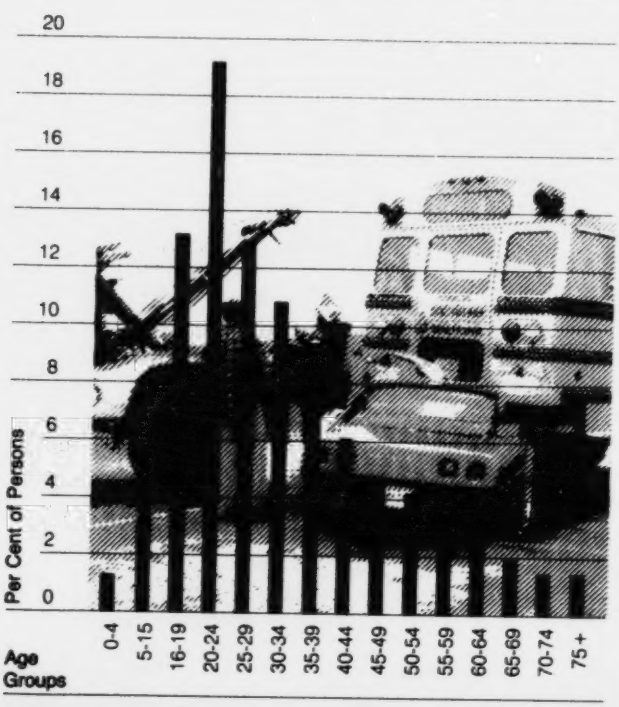


Table 2.3 Category of Persons Injured by Age Groups 1985

Category of Persons	Age Groups															Total
	0-4	5-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-74	75+	UK	
Driver	2	64	767	1,242	1,660	1,871	2,170	8,573	15,429	10,794	6,405	4,271	1,906	664	41	**55,859**
Passenger	1,493	5,007	1,123	1,305	1,451	1,524	1,516	4,804	6,275	3,711	2,700	2,335	1,444	691	338	**35,717**
Pedestrian	290	1,611	127	143	138	158	157	518	857	540	433	407	356	280	84	**6,099**
Bicyclist	29	1,659	259	217	183	197	191	587	567	174	99	46	30	12	414	**4,664**
Moped Driver	—	—	—	—	—	1	2	4	7	6	2	3	2	1	—	**28**
Motorcycle Driver	—	16	203	280	416	562	571	1,459	1,255	405	111	38	11	—	—	**5,327**
Motorcycle Passenger	3	66	64	79	104	93	84	193	150	51	14	11	—	—	8	**920**
Other	10	145	45	25	25	18	10	47	76	38	19	16	4	9	68	**555**
Total	**1,827**	**8,568**	**2,588**	**3,291**	**3,977**	**4,424**	**4,701**	**16,185**	**24,616**	**15,719**	**9,783**	**7,127**	**3,753**	**1,657**	**953**	**109,169**

Figure 2.4 Per Cent of Total Persons Injured by Age 1985



Note: Age groups in Tables 2.2 and 2.3 and Figures 2.3 and 2.4 are not directly comparable. Age groups in Figures 2.3 and 2.4 have been recombined into groups of equal size, each covering a 5 year period. The exception to this rule occurs in the teen's category where the break occurs at age 16 to accommodate for age of driver licensure.

Table 2.4 Sex of Driver by Class of Accident 1985

Sex of Driver	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Male	1,287	91,125	139,941	**232,353**
Female	284	35,217	50,677	**86,178**
Unknown	11	3,252	9,782	**13,045**
Total	**1,582**	**129,594**	**200,400**	**331,576**

While males represent 56% of the licensed driver population (See Table 2.17), they represent 72.9% of all drivers involved in accidents. Furthermore, in fatal accidents, 81.9% of the involved drivers were male.

Table 2.5 Driver Condition by Class of Accident 1985

Condition of Driver	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Normal	1,031	110,883	174,875	**286,789**
Had Been Drinking	181	6,793	5,989	**12,963**
Ability Impaired Alcohol	278	3,897	3,619	**7,794**
Ability Impaired Drugs	—	65	62	**127**
Fatigue	14	599	561	**1,174**
Medical or Physical Defect	4	334	238	**576**
Unknown	70	6,909	14,940	**21,919**
Other	4	114	116	**234**
Total	**1,582**	**129,594**	**200,400**	**331,576**

The percentage of alcohol involved drivers increases as the severity of the accident increases from property damage to fatal. Specifically, for property damage accidents, 4.8% of the involved drivers were impaired or had been drinking, while for fatal accidents, the percentage increases to 29%.

Figure 2.5 Per Cent Driver Condition in Fatal Accidents 1976-1985

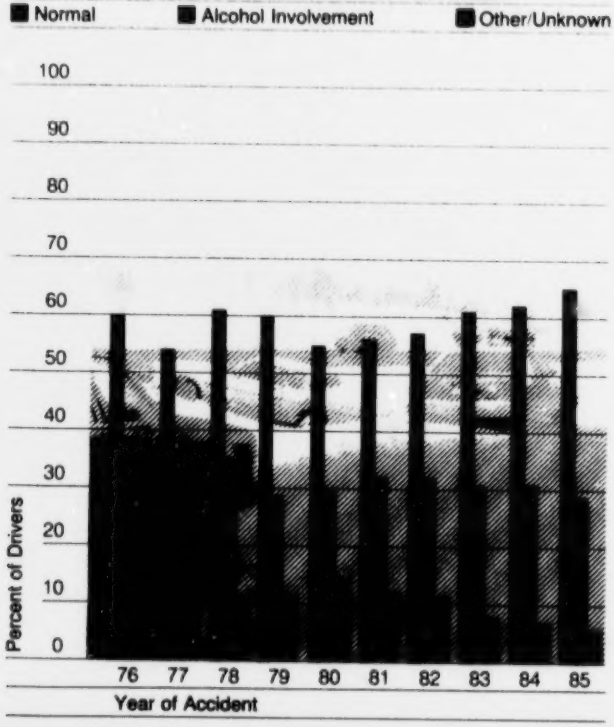


Table 2.6 Driver Age by Driver Condition in All Accidents 1985

Driver's Age	Driver Condition					Total
	Normal	Ability Impaired Alcohol	Had Been Drinking	Other	Unknown	
Under 16	285	4	23	3	24	**339**
16	4,307	36	151	35	140	**4,669**
17	7,113	88	307	62	235	**7,805**
18	8,805	171	529	94	277	**9,876**
19	9,720	290	806	92	350	**11,258**
20	10,474	376	943	84	386	**12,263**
21-24	41,782	1,578	3,091	318	1,499	**48,268**
25-34	77,480	2,550	3,881	463	2,540	**86,914**
35-44	54,758	1,331	1,734	318	1,530	**59,671**
45-54	33,153	790	804	192	884	**35,823**
55-64	23,795	433	484	184	563	**25,459**
65-74	11,064	122	158	159	251	**11,754**
75 & over	3,934	15	38	103	115	**4,205**
Unknown	119	10	14	4	13,125	**13,272**
Total	**286,789**	**7,794**	**12,963**	**2,111**	**21,919**	**331,576**

Table 2.7 Recorded Occurrence of Alcohol in Drivers Killed* 1985

Recorded Occurrence	Drivers Number	Drivers %
Apparently Normal	320	52.9
Ability Impaired by Alcohol	206	34.0
Had Been Drinking	79	13.1
Total	**605**	**100.0**

*Excludes cases where alcohol usage was not provided and conditions other than normal

Figure 2.6 Per Cent Driver Condition in Personal Injury Accidents 1976-1985

Figure 2.7 Per Cent Recorded Alcohol Occurrence in Drivers Killed 1976-1985

The proportion of alcohol involvement in drivers killed has fluctuated during the past decade. However, since 1981, there has been a decline each year, until, in the past two years, a larger percentage of drivers were reported to be "normal" than alcohol involved.

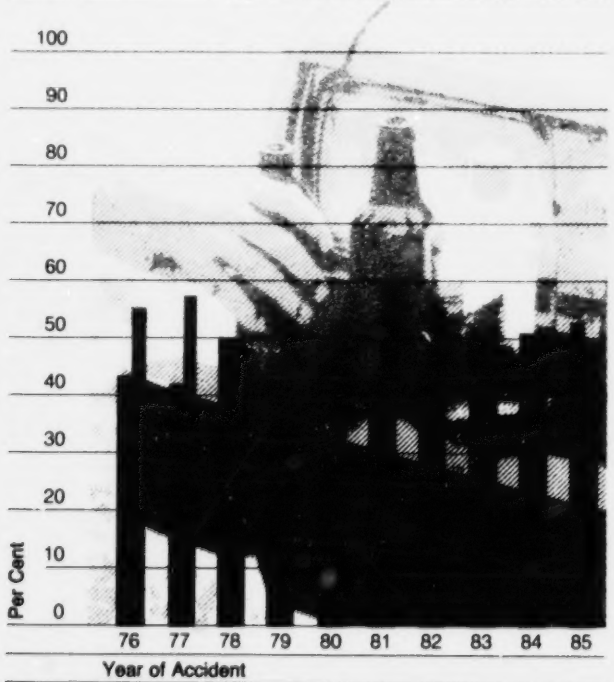


Table 2.8 Apparent Driver Action by Class of Accident 1985

Apparent Driver Action	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Driving Properly	628	58.684	86.149	**145,461**
Following Too Close	6	8.085	9.918	**18,009**
Speed Too Fast	326	12.332	16.384	**29,042**
Improper Turn	23	3.984	8.807	**12,814**
Disobey Traffic Signal	26	3.245	3.877	**7,148**
Disobey Stop Sign	52	1.874	2.073	**3,999**
Fail to Yield Right-Of-Way	115	12.484	23.610	**36,209**
Improper Passing	30	1.572	3.506	**5,108**
Lost Control	92	9.411	14.594	**24,097**
Wrong Way On One-Way Road	4	101	175	**280**
Disobey Other Controls	5	59	66	**130**
Unknown	155	8.161	17.650	**25,966**
Other*	120	9.602	13.591	**23,313**
Total	**1,582**	**129,594**	**200,400**	**331,576**

*Includes actions defined as Careless Driving, Inattentive Driving, Fell Asleep, Hit and Run, On Wrong Side of Road, Improper Parking, Impaired, Illegally Parked, Dangerous Driving, Inexperience, etc.

In 43.8% of all accidents, the involved drivers were driving properly. In fatal accidents, slightly fewer (39%) were driving properly.

In all accidents, the most common driver errors were: failure to yield the right-of-way (10.9%), speed too fast (8.8%), loss of control (7.3%), and following too close (5.4%).

Speed too fast was the most common driver error in fatal accidents (20.6%).

Table 2.9 Severity of Driver Injury by Seat Belt Usage 1985

Severity of Injury	Seat Belt Usage: Installed In-Use		Installed Not In Use & Not Installed		Usage Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
None	231,557	83 3	14 663	66 2	22 402	90 5	**268,622**	**82.7**
Minimal	29,933	10 8	3 205	14 5	992	4 0	**34,130**	**10.5**
Minor	14,337	5 1	2 885	13 0	833	3 4	**18,055**	**5.6**
Major	2 099	0 8	1 138	5 1	437	1 8	**3,674**	**1.1**
Fatal	154	0 06	255	1 16	93	0 4	**502**	**0.2**
Total	**278,080**	**100.0**	**22,146**	**100.0**	**24,757**	**100.0**	**324,983**	**100.0**

Table 2.10 Severity of Passenger Injury By Seat Belt Usage 1985

Severity of Injury	Seat Belt Usage: Installed In-Use		Installed Not In Use & Not Installed		Usage Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
None	112 106	81 1	12 052	58 9	12 234	89 2	**136,392**	**79.1**
Minimal	15,951	11 5	3 669	17 9	587	4 3	**20,207**	**11.7**
Minor	8 834	6 4	3 549	17 4	579	4 2	**12,962**	**7.5**
Major	1 274	0 9	1 014	5 0	260	1 9	**2,548**	**1.5**
Fatal	109	0 08	173	0 85	51	0 4	**333**	**0.2**
Total	**138,274**	**100.0**	**20,457**	**100.0**	**13,711**	**100.0**	**172,442**	**100.0**

In 1985, there were 114 deaths per 10,000 unbelted drivers and 5 deaths per 10,000 belted drivers in motor vehicle accidents In comparison when a 1984 Ontario roadside survey indicated 70% of drivers wore seat belts, there were 101 deaths per 10,000 unbelted drivers involved in accidents and 5 deaths per 10,000 drivers wearing seat belts.

Table 2.11 Restraint Use for Children (0-4 Years) Killed 1981-1985

Year	Restraint		No Restraint		Unknown		Total	
	Number	%	Number	%	Number	%	Number	%
1981	2	10 5	10	52 6	7	36 9	**19**	**100**
1982	1	8 3	10	83 3	1	8 3	**12**	**100**
1983	2	20 0	5	50 0	3	30 0	**10**	**100**
1984	3	27 3	8	72 7	0	0 0	**11**	**100**
1985	4	33 3	7	58 3	1	8 3	**12**	**100**

Table 2.12 Restraint Use for Children (0-4 Years) Injured by Severity of Injury 1981-1985

Year	% of Unrestrained		% of Restrained	
	Minimal/ Minor	Major/ Fatal	Minimal/ Minor	Major/ Fatal
1981	93 8	6 2	95 0	5 0
1982	89 5	10 5	93 4	6 6
1983	88 6	11 4	92 7	7 3
1984	90 7	9 2	96 4	3 6
1985	87 9	12 1	95 9	5 1

After introduction of child restraint legislation in November 1982 the average annual number of deaths for children under five years of age dropped from 19 to 12 (– 36 8%) and the average annual number of injuries decreased from 1600 to 1350 (– 15%)
Of the children under five years of age killed during the last five years (1981-1985) almost two-thirds were travelling unrestrained

Table 2.13 Pedestrian Condition by Severity of Injury 1985

Condition of Pedestrian	Killed	Injured
Normal	111	4 847
Had Been Drinking	15	362
Ability Impaired Alcohol	37	143
Ability Impaired Drugs	–	10
Fatigue	–	2
Medical or Physical Defect	2	91
Unknown	15	567
Other	2	77
Total	**182**	**6,099**

While 28 6% of pedestrians killed had been drinking or were impaired by alcohol, only 8 2% of pedestrians injured were alcohol involved

Table 2.14 Apparent Pedestrian Action by Severity of Injury 1985

Apparent Pedestrian Action	Killed	Injured
Crossing Intersection With Right-of-Way	12	1 216
Crossing Intersection Without Right-of-Way	9	482
Crossing Intersection No Traffic Control	9	133
Crossing Pedestrian Crossover	5	185
Walking on Roadway With Traffic	15	203
Walking on Roadway Against Traffic	4	119
On Sidewalk or Shoulder	16	426
Coming from Behind Parked Vehicle or Object	4	382
Playing or Working on Highway	2	91
Running into Roadway	28	1 036
Crossing Through Traffic	52	912
Other	26	914
Total	**182**	**6,099**

The largest number of pedestrian fatalities resulted from crossing through traffic (28 5%) followed by running into the roadway (15 4%) With respect to injuries, the majority resulted from pedestrians crossing an intersection with the right-of-way (19 9%) or running into the roadway (17%)

2b. putting the people in context

Table 2.15 Category of Persons Killed and Injured 1976-1985

Year	Ontario Population (Est.)	Category of Persons								Persons Killed in All Classes		Persons Injured in All Classes	
		Driver		Passenger*		Pedestrian		All Others			Rate/100,000		Rate/100,000
		Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Number	Population	Number	Population
1976	8,265,000	648	39,631	461	29,553	251	7,218	151	7,334	1,511	18.3	83,736	1,013.1
1977	8,373,000	609	45,620	393	34,854	252	6,998	166	8,192	1,420	17.0	95,664	1,142.5
1978	8,444,000	623	46,953	383	34,578	284	6,314	160	7,494	1,450	17.2	94,979	1,124.8
1979	8,546,000	668	50,618	468	36,332	273	6,436	151	7,935	1,560	18.3	101,321	1,185.6
1980	8,570,000	682	50,653	413	35,982	266	6,548	147	8,184	1,508	17.6	101,367	1,182.8
1981	8,625,000	657	50,574	393	34,450	237	6,344	158	8,953	1,445	16.8	100,321	1,163.1
1982	8,715,000	487	45,409	296	31,588	179	5,981	176	9,837	1,138	13.1	92,815	1,065.0
1983	8,816,000	528	45,440	302	30,283	204	5,618	170	10,365	1,204	13.7	91,706	1,040.2
1984	9,024,000	460	48,674	282	31,865	189	5,767	201	10,924	1,132	12.5	97,230	1,077.5
1985	9,066,000	502	55,859	333	35,717	182	6,099	174	11,494	1,191	13.1	109,169	1,204.2

*Excludes motorcycle passengers (Motorcycle passengers included with "all others")

The ten year trend for fatalities per 100,000 population shows that fatalities are decreasing for all identified categories of road users (not including "other" category)

Table 2.16 Sex of Driver Population by Age Groups 1985

Sex of Driver	Age Groups							Total
	16-19	20-24	25-34	35-44	45-54	55-64	65+	
Male	170,676	381,498	765,676	649,505	469,443	404,720	325,278	**3,166,796**
Female	123,232	305,969	677,651	556,109	350,954	280,920	198,791	**2,493,626**
Total	**293,908**	**687,467**	**1,443,327**	**1,205,614**	**820,397**	**685,640**	**524,069**	**5,660,422**

Table 2.17 Driver Population Age Groups 1976-1985

Year	Age Groups							Total
	16-19	20-24	25-34	35-44	45-54	55-64	65 +	
1976	303 697	572 038	1 120 151	808 893	717 552	490 718	302 876	**4,315,925**
1977	327 021	604 822	1 188 170	846 727	739 247	517 903	339 013	**4,562,903**
1978	333 929	625 774	1 231 844	882 939	749 350	541 028	360 682	**4,725,546**
1979	352 617	636 554	1 264 128	912 519	755 093	559 011	378 429	**4,858,351**
1980	345 077	647 805	1 300 738	943 540	764 308	508 173	407 830	**4,993,471**
1981	354 492	659 144	1 313 592	990 806	771 931	604 892	428 320	**5,123,177**
1982	342 136	670 118	1 328 974	1 051 422	779 235	628 131	447 182	**5,247,198**
1983	320 478	682 033	1 359 350	1 103 403	792 933	650 687	471 375	**5,380,259**
1984	300 364	689 476	1 396 560	1 155 421	806 207	671 271	494 612	**5,513,911**
1985	293 908	687 467	1 443 327	1 205 614	820 397	685 640	524 069	**5,660,422**

The licensed driver population is changing. The largest area of growth in the population has occurred within the 25 to 34 year old age group. The number of drivers in the 16 to 19 year old age group has declined.

Table 2.18 Driver Licence Class by Sex 1985

Licence Class	Driver Sex				Total	%
	Male	%	Female	%		
A	79 902	2 52	566	02	**80,468**	**1.48**
AM	22 439	70	91	00	**22,530**	**.38**
AB	3 049	09	149	00	**3,198**	**.05**
AC	9 406	29	90	00	**9,496**	**.16**
ABM	1 221	03	52	00	**1,273**	**.02**
ACM	3 509	11	22	00	**3,531**	**.05**
B	14 858	46	10 877	43	**25,735**	**.45**
BM	3 216	10	481	01	**3,697**	**.06**
C	9 460	29	347	01	**9,807**	**.18**
CM	2 225	07	34	00	**2,259**	**.03**
D	158 410	5 00	3 982	15	**162,392**	**2.81**
DM	29 998	94	227	00	**30,225**	**.49**
DE	69	00	12	00	**81**	**.00**
DF	2 486	07	71	00	**2,557**	**.04**
DEM	13	00	0	00	**13**	**.00**
DFM	857	02	5	00	**862**	**.01**
E	1 159	03	1 819	07	**2,978**	**.04**
EM	137	00	28	00	**165**	**.00**
F	9 464	29	4 717	18	**14,181**	**.25**
FM	2 198	06	249	00	**2,447**	**.04**
G	2 527 691	79 81	2 434 333	97 62	**4,962,024**	**87.96**
GM	279 428	8 82	34 517	1 38	**313,945**	**5.28**
M	5 595	17	947	03	**6,542**	**.11**
Other/Unknown	6	00	10	00	**16**	**.00**
Total	**3,166,796**	**100.00**	**2,493,626**	**100.00**	**5,660,422**	**100.00**

Table 2.19 Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1985

Year	Licensed Drivers	Total Accidents	Persons Killed	Persons Injured
1931	666,266	9,241	571	8,494
1932	648,710	9,171	502	8,231
1933	638,280	8,634	403	7,877
1934	665,743	9,645	512	8,990
1935	707,457	10,648	560	9,839
1936	755,765	11,388	546	10,251
1937	802,765	13,906	766	12,092
1938	866,729	13,715	640	11,683
1939	899,572	13,710	652	11,638
1940	937,551	16,921	716	13,715
1941	986,773	18,167	801	14,275
1942	961,883	13,490	567	10,205
1943	919,457	11,025	549	8,628
1944	905,650	11,004	498	8,373
1945	971,852	13,458	598	9,804
1946	1,087,445	17,356	688	12,228
1947	1,144,291	22,293	734	13,056
1948	1,209,408	27,406	740	14,970
1949	1,278,584	34,472	830	17,469
1950	1,366,388	43,681	791	19,940
1951	1,461,538	54,920	949	22,557
1952	1,556,559	58,515	1,010	23,643
1953	1,656,259	65,866	1,082	24,353
1954	1,747,567	62,509	1,045	24,607
1955	1,856,845	63,219	1,111	26,246
1956	1,967,789	71,399	1,180	28,626
1957	2,088,551	76,302	1,279	30,414
1958	2,176,417	76,884	1,112	30,106
1959	2,270,246	81,518	1,187	31,602
1960	2,355,567	87,186	1,166	34,436
1961	2,414,615	85,577	1,268	37,146
1962	2,469,425	94,231	1,383	41,766
1963	2,555,015	104,919	1,421	47,801
1964	2,694,023	111,232	1,424	54,560
1965	2,739,138	128,462	1,611	60,917
1966	2,821,648	139,781	1,596	65,210
1967	3,004,654	145,008	1,719	67,280
1968	3,128,509	155,127	1,586	71,520
1969	3,247,979	169,395	1,683	74,902
1970	3,422,892	141,609	1,535	75,126

Table 2.19 Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1985 (continued)

Year	Licensed Drivers	Total Accidents	Persons Killed	Persons Injured
1971	3,563,197	158,831	1,769	84,650
1972	3,688,541	189,494	1,934	95,181
1973	3,841,628	193,021	1,959	97,790
1974	3,972,980	204,271	1,748	98,673
1975	4,160,623	213,689	1,800	97,034
1976	4,315,925	211,865	1,511	83,736
1977	4,562,903	218,567	1,420	95,664
1978	4,725,546	186,363	1,450	94,979
1979	4,858,351	197,196	1,560	101,321
1980	4,993,531	196,501	1,508	101,367
1981	5,123,177	198,372	1,445	100,321
1982	5,247,198	187,943	1,138	92,815
1983	5,380,259	181,999	1,204	91,706
1984	5,513,911	194,782	1,132	97,230
1985	5,660,422	189,750	1,191	109,169

Since 1931, improvements have been seen with respect to the rate of persons killed per accident. In 1931, .06 people were killed per accident. By 1985, the number killed per accident had decreased by nearly 100% to .006 persons killed.

Table 2.20 Original Licences Issued 1981-1985

Year	Original Licences
1981	241,175
1982	222,143
1983	209,682
1984	209,675
1985	224,513

Table 2.21 Temporary Licence Permits Issued for Class L's and Class R's 1981-1985

Year	Licence Permits	
	L	R
1981	282,770	29,093
1982	358,615	45,657
1983	336,808	44,404
1984	342,045	45,672
1985	352,908	43,967

Table 2.19 Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1985

Year	Licensed Drivers	Total Accidents	Persons Killed	Persons Injured
1931	666,266	9,241	571	8,494
1932	648,710	9,171	502	8,231
1933	638,280	8,634	403	7,877
1934	665,743	9,645	512	8,990
1935	707,457	10,648	560	9,839
1936	755,765	11,388	546	10,251
1937	802,765	13,906	766	12,092
1938	866,729	13,715	640	11,683
1939	899,572	13,710	652	11,638
1940	937,551	16,921	716	13,715
1941	986,773	18,167	801	14,275
1942	961,883	13,490	567	10,205
1943	919,457	11,025	549	8,628
1944	905,650	11,004	498	8,373
1945	971,852	13,458	598	9,804
1946	1,087,445	17,356	688	12,228
1947	1,144,291	22,293	734	13,056
1948	1,209,408	27,406	740	14,970
1949	1,278,584	34,472	830	17,469
1950	1,366,388	43,681	791	19,940
1951	1,461,538	54,920	949	22,557
1952	1,556,559	58,515	1,010	23,643
1953	1,656,259	65,866	1,082	24,353
1954	1,747,567	62,509	1,045	24,607
1955	1,856,845	63,219	1,111	26,246
1956	1,967,789	71,399	1,180	28,626
1957	2,088,551	76,302	1,279	30,414
1958	2,176,417	76,884	1,112	30,106
1959	2,270,246	81,518	1,187	31,602
1960	2,355,567	87,186	1,166	34,436
1961	2,414,615	85,577	1,268	37,146
1962	2,469,425	94,231	1,383	41,766
1963	2,555,015	104,919	1,421	47,801
1964	2,694,023	111,232	1,424	54,560
1965	2,739,138	128,462	1,611	60,917
1966	2,821,648	139,781	1,596	65,210
1967	3,004,654	145,008	1,719	67,280
1968	3,128,509	155,127	1,586	71,520
1969	3,247,979	169,395	1,683	74,902
1970	3,422,892	141,609	1,535	75,126

Table 2.19 Licensed Drivers, Total Accidents, Persons Killed and Persons Injured 1931-1985 (continued)

Year	Licensed Drivers	Total Accidents	Persons Killed	Persons Injured
1971	3,563,197	158,831	1,769	84,650
1972	3,688,541	189,494	1,934	95,181
1973	3,841,628	193,021	1,959	97,790
1974	3,972,980	204,271	1,748	98,673
1975	4,160,623	213,689	1,800	97,034
1976	4,315,925	211,865	1,511	83,736
1977	4,562,903	218,567	1,420	95,664
1978	4,725,546	186,363	1,450	94,979
1979	4,858,351	197,196	1,560	101,321
1980	4,993,531	196,501	1,508	101,367
1981	5,123,177	198,372	1,445	100,321
1982	5,247,198	187,943	1,138	92,815
1983	5,380,259	181,999	1,204	91,706
1984	5,513,911	194,782	1,132	97,230
1985	5,660,422	189,750	1,191	109,169

Since 1931, improvements have been seen with respect to the rate of persons killed per accident. In 1931, .06 people were killed per accident. By 1985, the number killed per accident had decreased by nearly 100% to .006 persons killed.

Table 2.20 Original Licences Issued 1981-1985

Year	Original Licences
1981	241,175
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1984	209,675
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Table 2.21 Temporary Licence Permits Issued for Class L's and Class R's 1981-1985

Year	Licence Permits	
	L	R
1981	282,770	29,093
1982	358,615	45,657
1983	336,808	44,404
1984	342,045	45,672
1985	352,908	43,967

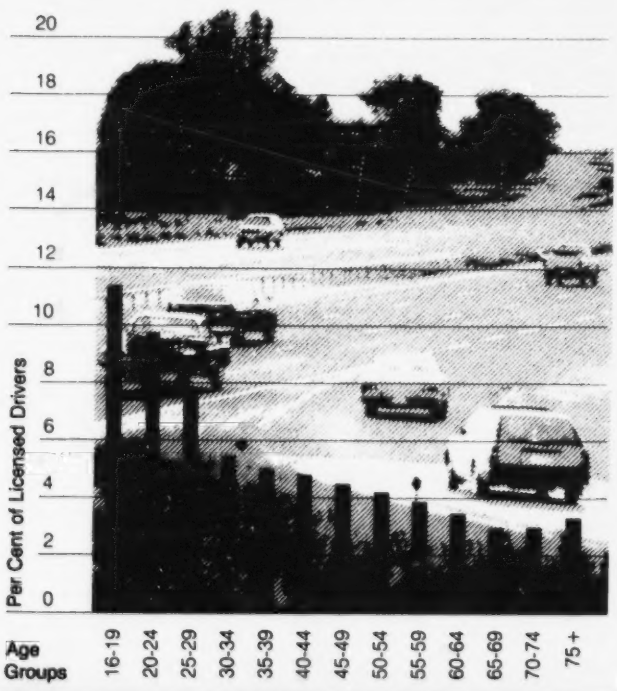
Table 2.22 Driver Age Groups — Number Licensed, Accident Involvement and Per Cent Involved in Accidents 1985

Drivers' Age	Drivers Licensed			Drivers Involved in Accidents			% of Drivers of Each Age Involved in Accidents		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Under 16	—	—	—	282	57	**339**	—	—	—
16	19,432	11,764	**31,196**	3,326	1,343	**4,669**	17.1	11.4	**15.0**
17	41,636	29,687	**71,323**	5,753	2,051	**7,804**	13.8	6.9	**11.0**
18	51,054	37,601	**88,655**	7,394	2,482	**9,876**	14.5	6.6	**11.1**
19	58,554	44,180	**102,734**	8,506	2,752	**11,258**	14.5	6.2	**11.0**
20	67,048	51,466	**118,514**	9,308	2,955	**12,263**	13.9	5.8	**10.4**
21-24	314,450	254,503	**568,953**	36,178	12,090	**48,268**	11.5	4.8	**8.5**
25-34	765,676	677,651	**1,443,327**	62,524	24,390	**86,914**	8.2	3.6	**6.0**
35-44	649,505	556,109	**1,205,614**	41,299	18,372	**59,671**	6.4	3.3	**5.0**
45-54	469,443	350,954	**820,397**	26,380	9,443	**35,823**	5.6	2.7	**4.4**
55-64	404,720	280,920	**685,640**	19,319	6,140	**25,459**	4.8	2.2	**3.7**
65-74	238,930	156,233	**395,163**	8,713	3,041	**11,754**	3.6	2.0	**3.0**
75 & Over	86,348	42,558	**128,906**	3,184	1,021	**4,205**	3.7	2.4	**3.3**
Unknown	—	—	—	—	—	**13,273**	—	—	—
Total	**3,166,796**	**2,493,626**	**5,660,422**	**232,166**	**86,137**	**331,576**	**7.3**	**3.5**	**5.9**

As driver age increases, accident involvement rates decrease for both male and female drivers.

More than two and one half times as many male drivers compared to female drivers were involved in accidents.

Figure 2.8 Per Cent of Licensed Drivers Involved in Accidents by Age 1985



3 the accident

3a. types of accidents

Table 3.1 Class of Accident 1976-1985

Year	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
1976	1,265	58,028	152,572	**211,865**
1977	1,213	63,787	153,567	**218,567**
1978	1,263	62,664	122,436	**186,363**
1979	1,316	67,201	128,679	**197,196**
1980	1,296	67,391	127,814	**196,501**
1981	1,234	67,292	129,846	**198,372**
1982	997	62,956	123,990	**187,943**
1983	1,042	62,735	118,222	**181,999**
1984	1,011	66,101	127,670	**194,782**
1985	1,036	73,840	114,874	**189,750**

Since 1976, total reportable motor vehicle accidents have declined 10.4% and property damage accidents by 24.7%. The latter drop may be partially attributable to a change in reporting criterion. (See Glossary) The number of personal injury accidents is at a ten year high (73,840) but as noted in Figure 2.2, this is largely due to increases within the minimal injury category.

Table 3.2 Accident Rate Per One Million Kilometres Travelled 1976-1985

Year	Accident Rate
1976	3.3
1977	3.3
1978	2.7
1979	2.7
1980	2.7
1981	2.8
1982	2.9
1983	2.8
1984	2.9
1985	2.8

Table 3.3 Initial Impact Type by Class of Accident 1985

Accident Involving Motor Vehicle and Moveable Objects:	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Other Motor Vehicle/s	462	45,943	86,278	**132,683**
Pedestrian	165	5,452	2	**5,619**
Cyclist	43	4,550	35	**4,628**
Railway Train	13	73	76	**162**
Street Car	—	70	188	**258**
Farm Tractor	2	76	136	**214**
Animal	1	320	2,769	**3,090**
Other Moveable Object	1	131	241	**373**
Sub-total	**687**	**56,615**	**89,725**	**147,027**
Fixed Objects:				
Restraining Barrier	26	1,619	4,505	**6,150**
Rigid Pole	30	1,707	2,953	**4,690**
Breakaway Pole	2	462	1,004	**1,468**
Tree	45	1,151	1,389	**2,585**
Post	23	626	1,559	**2,208**
Fence	—	362	883	**1,245**
Culvert	17	453	300	**770**
Bridge Support	8	168	279	**455**
Rock Face	26	334	394	**754**
Snow Bank or Drift	4	449	962	**1,415**
Ditch	85	4,280	4,037	**8,402**
Curb	26	1,082	1,444	**2,552**
Crash Cushion	1	30	76	**107**
Building or Wall	2	174	361	**537**
Other Fixed Object	20	1,173	1,882	**3,075**
Sub-total	**315**	**14,070**	**22,028**	**36,413**
Other Circumstances:				
Fire/Explosion	—	33	628	**661**
Submersion	1	5	17	**23**
Rollover	26	1,593	991	**2,610**
Other Non-Collision Event	7	1,524	1,485	**3,016**
Sub-total	**34**	**3,155**	**3,121**	**6,310**
Total	**1,036**	**73,840**	**114,874**	**189,750**

Collisions with moveable objects account for 77.5% of all accidents, (66.3% of fatals, 76.6% of personal injury and 78.1% of property damage accidents). Collisions with fixed objects account for 19.2% of all accidents, (30.4% of fatals, 19.1% of personal injury and 19.2% of property damage accidents). Accidents involving other circumstances, e.g. submersion, account for 3.3% of all accidents (3.3% of fatals, 4.3% of personal injury and 2.7% of property damage accidents).

3b. time and environment

Table 3.4 Month of Occurrence by Class of Accident 1985

Month of Occurrence	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
January	47	4.5	5,423	7.4	13,044	11.4	**18,514**	**9.8**
February	46	4.4	4,886	6.6	11,101	9.7	**16,033**	**8.4**
March	62	6.0	4,408	6.0	7,666	6.7	**12,136**	**6.4**
April	71	6.9	4,889	6.6	6,993	6.1	**11,953**	**6.3**
May	102	9.8	6,599	8.9	8,015	7.0	**14,716**	**7.8**
June	113	10.9	7,160	9.7	8,490	7.4	**15,763**	**8.3**
July	126	12.2	7,024	9.5	8,161	7.1	**15,311**	**8.1**
August	116	11.2	7,078	9.6	8,082	7.0	**15,276**	**8.1**
September	87	8.4	6,288	8.5	7,811	6.8	**14,186**	**7.5**
October	103	10.0	6,526	8.8	9,470	8.2	**16,099**	**8.5**
November	90	8.7	6,917	9.4	12,382	10.8	**19,389**	**10.2**
December	73	7.0	6,642	9.0	13,659	11.9	**20,374**	**10.7**
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

Although motor vehicle accidents occur most frequently during November, December and January (29.1%), fatal accidents occur most frequently during the summer months of June, July and August (34.3%).

Figure 3.1 Accidents by Season of Occurrence and Class of Accident 1985

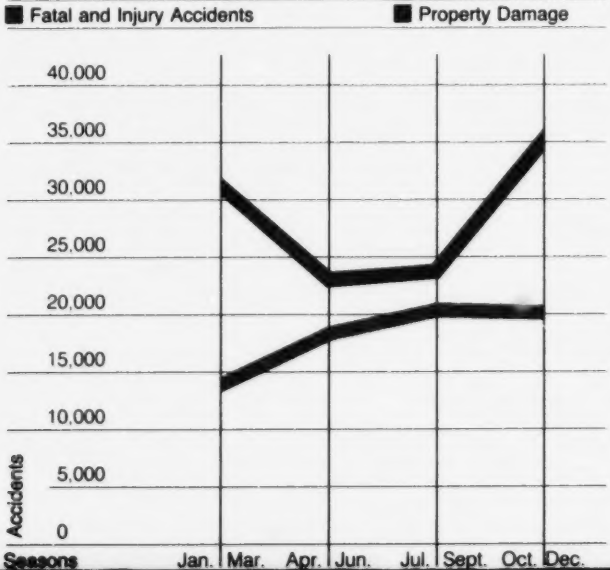


Table 3.5 Day of Week by Class of Accident 1985

Day of Occurrence	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Sunday	156	15.1	8,919	12.1	12,161	10.6	**21,236**	**11.2**
Monday	118	11.4	9,500	12.9	15,343	13.3	**24,961**	**13.1**
Tuesday	114	11.0	9,936	13.5	16,719	14.6	**26,769**	**14.1**
Wednesday	107	10.3	9,359	12.7	15,108	13.2	**24,574**	**12.9**
Thursday	115	11.1	10,853	14.7	17,013	14.8	**27,981**	**14.7**
Friday	198	19.1	12,833	17.4	20,542	17.9	**33,573**	**17.7**
Saturday	228	22.0	12,440	16.8	17,988	15.6	**30,656**	**16.2**
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

Table 3.6 Hour of Occurrence by Class of Accident 1985

Hour of Occurrence A.M.	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
12 to 1 a.m.	45		1,648		2,491		**4,184**	
1 to 2 a.m.	59		2,397		2,934		**5,390**	
2 to 3 a.m.	36		1,458		2,025		**3,519**	
3 to 4 a.m.	24		845		1,162		**2,031**	
4 to 5 a.m.	25		587		790		**1,402**	
5 to 6 a.m.	18		472		835		**1,325**	
Sub-total	**207**	**20.0**	**7,407**	**10.0**	**10,237**	**8.9**	**17,851**	**9.4**
6 to 7 a.m.	31		1,403		2,354		**3,788**	
7 to 8 a.m.	33		2,676		4,725		**7,434**	
8 to 9 a.m.	28		3,697		6,721		**10,446**	
9 to 10 a.m.	26		2,553		4,931		**7,510**	
10 to 11 a.m.	25		2,875		5,255		**8,155**	
11 to 12 a.m.	42		3,683		6,039		**9,764**	
Sub-total	**185**	**17.9**	**16,887**	**22.9**	**30,025**	**26.1**	**47,097**	**24.8**
Hour of Occurrence P.M.								
12 to 1 p.m.	31		4,143		6,564		**10,738**	
1 to 2 p.m.	46		3,923		6,404		**10,373**	
2 to 3 p.m.	39		4,213		6,742		**10,994**	
3 to 4 p.m.	52		5,648		8,692		**14,392**	
4 to 5 p.m.	65		6,516		9,544		**16,125**	
5 to 6 p.m.	59		5,972		8,783		**14,814**	
Sub-total	**292**	**28.2**	**30,415**	**41.2**	**46,729**	**40.7**	**77,436**	**40.8**
6 to 7 p.m.	58		4,409		6,213		**10,680**	
7 to 8 p.m.	66		3,937		5,305		**9,308**	
8 to 9 p.m.	53		3,132		4,219		**7,404**	
9 to 10 p.m.	55		2,762		3,868		**6,685**	
10 to 11 p.m.	64		2,315		3,312		**5,691**	
11 to 12 p.m.	49		2,318		3,377		**5,744**	
Sub-total	**345**	**33.3**	**18,873**	**25.6**	**26,294**	**22.9**	**45,512**	**24.0**
Unknown	7	0.7	258	0.3	1,589	1.4	**1,854**	**1.0**
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

The largest proportion of all accidents occur between twelve noon and six p.m. In contrast, fatal accidents occur most frequently from six p.m. to twelve midnight.

Table 3.7 Statutory Holidays, Holiday Weekends — Fatal Accidents, Persons Killed and Persons Injured 1985

Statutory Holiday	Number of Fatal Accidents	Drivers		Passengers		Others		Total	
		Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Easter Weekend	7	6	2	1	2	2	—	**9**	**4**
Victoria Day	19	7	14	8	20	6	—	**21**	**34**
Canada Day	19	12	10	8	17	5	1	**25**	**28**
Civic Holiday	13	6	9	14	23	1	—	**21**	**32**
Labour Day	9	4	4	3	6	3	—	**10**	**10**
Thanksgiving Day	12	9	7	4	9	—	—	**13**	**16**
Christmas/Boxing Day	2	1	1	1	5	1	—	**3**	**6**

On average 3 day weekend periods, (Friday six p.m. to Monday midnight) for the summer, winter seasons and the whole year, 16.5, 10.3, and 13.2 people were killed, respectively.

Figure 3.2 Light Condition for All Accidents 1985

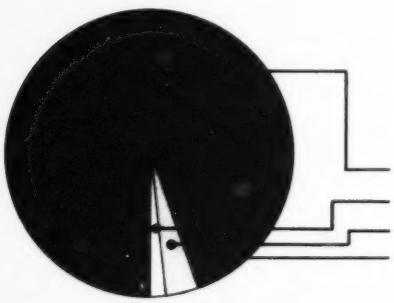


Table 3.8 Light Condition by Class of Accident 1985

Light Condition	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Daylight	502	48.5	48,219	65.3	74,603	65.0	**123,324**	**65.0**
Dawn	22	2.1	983	1.3	1,752	1.5	**2,757**	**1.5**
Dusk	39	3.7	2,762	3.8	4,209	3.7	**7,010**	**3.7**
Darkness	473	45.7	21,876	29.6	34,310	29.8	**56,659**	**29.8**
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

Although only 29.8% of all accidents occurred in darkness, 45.7% of fatal accidents occurred in this condition.

Figure 3.3 Visibility for All Accidents 1985

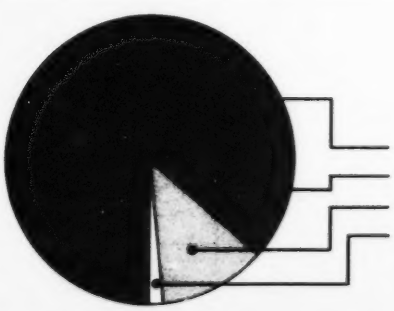


Table 3.9 Visibility by Class of Accident 1985

Visibility	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Clear	846	81.7	56,397	76.4	82,759	72.0	140,002	73.8
Rain	95	9.2	10,091	13.7	15,127	13.2	25,313	13.4
Snow or Sleet	81	7.8	6,507	8.8	15,697	13.7	22,285	11.7
Fog, Mist, Smoke or Dust	14	1.4	845	1.1	1,291	1.1	2,150	1.1
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

3c. the accident location

Table 3.10 Road Jurisdiction by Class of Accident 1985

Road Jurisdiction	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Municipal (Excl. Twp. Rd.)	356	50,076	78,377	**128,809**
Provincial Highway	439	15,108	23,429	**38,976**
Township	101	4,137	6,324	**10,562**
County or District	91	2,827	4,084	**7,002**
Regional Municipality	38	1,296	1,832	**3,166**
Other	11	396	828	**1,235**
Total	**1,036**	**73,840**	**114,874**	**189,750**

Table 3.11 Road Jurisdiction for All Accidents 1977-1985

Road Jurisdiction	Year									Total
	1977	1978	1979	1980	1981	1982	1983	1984	1985	
Municipal	127,766	128,719	136,091	135,579	135,346	126,876	119,230	136,456	128,809	**1,174,872**
Provincial	39,039	34,301	36,212	34,780	35,584	33,246	32,667	36,110	38,976	**320,915**
Township	11,597	10,834	11,905	12,909	11,573	11,476	11,330	11,628	10,562	**103,814**
County or District	8,330	7,200	7,593	6,605	6,475	5,669	5,258	6,248	7,002	**60,380**
Regional Municipality	30,817	4,620	4,742	5,562	8,220	9,722	12,592	3,393	3,166	**82,834**
Other/Unknown	1,018	689	653	1,066	1,174	954	922	947	1,235	**8,658**
Total	**218,567**	**186,363**	**197,196**	**196,501**	**198,372**	**187,943**	**181,999**	**194,782**	**189,750**	**1,751,473**

Figure 3.4 **Road Location for All Accidents 1985**

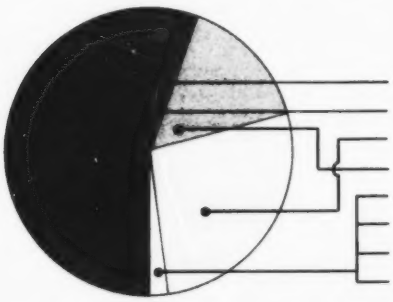


Table 3.12 **Road Location by Class of Accident 1985**

Road Location	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Non-intersection	651	62 8	27 742	37 6	45.098	39 3	**73,491**	**38.7**
Intersection Related	52	5 0	13 644	18 5	18.575	16 2	**32,271**	**17.0**
In Intersection	198	19 1	21 281	28 8	29 208	25 4	**50,687**	**26.7**
At/Near Private Drive	90	8 7	9 885	13 4	19.900	17 3	**29,875**	**15.8**
At Railway Crossing	16	1 6	246	0 3	305	0 3	**567**	**0.3**
Underpass or Tunnel	5	0 5	159	0 2	276	0 2	**440**	**0.2**
Overpass or Bridge	24	2 3	858	1 2	1.483	1 3	**2,365**	**1.3**
Other	—	—	25	—	29	—	**54**	**—**
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

Figure 3.5 **Road Surface Condition for All Accidents 1985**

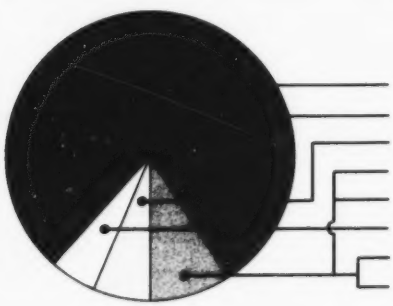


Table 3.13 **Road Surface Condition by Class of Accident 1985**

Road Surface Condition	Class of Accident						Total	%
	Fatal	%	Personal Injury	%	Property Damage	%		
Dry	723	69 8	44 112	59 7	57.598	50 1	**102,433**	**54.0**
Wet	198	19 1	18 620	25 2	29 414	25 6	**48,232**	**25.4**
Loose Snow	35	3 4	3 457	4 7	9 129	8 0	**12,621**	**6.7**
Slush	22	2 1	2 153	2 9	5.124	4 5	**7,299**	**3.8**
Packed Snow	26	2 5	2 066	2 8	6.044	5 3	**8,136**	**4.3**
Ice	25	2 4	2 867	3 9	6 809	5 9	**9,701**	**5.1**
Mud	1	0 1	30	0 1	59	0 1	**90**	**0.1**
Loose Sand or Gravel	6	0 6	535	0 7	697	0 6	**1,238**	**0.6**
Total	**1,036**	**100.0**	**73,840**	**100.0**	**114,874**	**100.0**	**189,750**	**100.0**

4

place of accident in ontario

Table 4.1 **Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1985**

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Persons Injured	Vehicle Registrations
Ontario		**8,824,946**	**189,750**	**1,036**	**73,840**	**114,874**	**1,191**	**109,169**	**5,223,463**
Algoma		**138,920**	**2,898**	**17**	**1,105**	**1,776**	**20**	**1,610**	**78,970**
Blind River, t		3,560	49	—	16	33	—	20	
Elliot Lake, t	M	19,430	148	—	52	96	—	63	
Sault Ste. Marie, c	M	84,370	1,751	1	695	1,055	1	973	
Thessalon, t		1,540	5	—	3	2	—	3	
Other		30,020	945	16	339	590	19	551	
Brant		**105,320**	**2,338**	**22**	**881**	**1,435**	**30**	**1,297**	**60,179**
Brantford, c	M	75,680	1,412	4	523	885	4	711	
Paris, t	M	7,500	89	—	28	61	—	53	
Other		22,140	837	18	330	489	26	533	
Bruce		**62,110**	**1,000**	**4**	**417**	**579**	**6**	**671**	**39,316**
Chesley, t	M	1,860	8	—	6	2	—	10	
Kincardine, t	M	6,320	50	—	10	40	—	13	
Lucknow, vl		1,080	12	—	3	9	—	3	
Paisley, vl		1,070	5	—	2	3	—	4	
Port Elgin, t	M	6,520	65	—	26	39	—	37	
Southampton, t	M	2,920	27	—	7	20	—	15	
Teeswater, vl		1,050	7	—	1	6	—	1	
Walkerton, t	M	4,770	62	—	13	49	—	14	
Wiarton, t	M	2,110	13	—	6	7	—	8	
Other		34,410	751	4	343	404	6	566	
Cochrane		**98,690**	**1,753**	**7**	**627**	**1,119**	**7**	**947**	**53,630**
Cochrane, t		4,900	46	1	14	31	1	25	
Hearst, t		5,710	66	—	17	49	—	22	
Iroquois Falls, t		6,350	52	—	12	40	—	14	
Kapuskasing, t	M	12,110	118	—	34	84	—	44	
Smooth Rock Falls, t		2,380	9	—	2	7	—	3	
Timmins, c	M	47,250	742	1	252	489	1	353	
Other		19,990	720	5	296	419	5	486	
Dufferin		**32,430**	**806**	**5**	**313**	**488**	**7**	**485**	**20,888**
Grand Valley, vl		1,280	4	—	1	3	—	1	
Orangeville, t	M	14,370	228	1	91	136	1	122	
Shelburne, t	M	2,840	37	—	12	25	—	17	
Other		13,940	537	4	209	324	6	345	

Legend

t	town	**Other**	Town, village, township area with under 1,000 population	**M** Municipal police force
c	city			
vl	village			
twp	urbanites township area with over 1,000 population			

Table 4.1 Continued

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Injured	Vehicle Registrations
Dundas		**19,170**	**383**	**2**	**150**	**231**	**2**	**229**	**13,237**
Chesterville, vl		1,460	22	—	7	15	—	8	
Iroquois, vl		1,200	5	—	3	2	—	4	
Morrisburg, vl		2,340	22	—	9	13	—	10	
Winchester, vl		2,060	11	—	2	9	—	3	
Other		12,110	323	2	129	192	2	204	
Durham	**M**	**299,410**	**6,338**	**42**	**2,658**	**3,638**	**42**	**3,998**	**209,557**
Ajax, t		27,170	389	—	171	218	—	255	
Brock, twp		9,580	48	—	25	23	—	43	
Newcastle, t		33,080	420	5	184	231	5	274	
Oshawa, c		123,030	2,320	7	960	1,353	7	1,358	
Pickering, t		41,100	509	1	229	279	1	364	
Scugog, t		14,160	85	2	39	44	2	65	
Uxbridge, twp		11,640	78	2	27	49	2	42	
Whitby, t		39,630	751	5	309	437	5	455	
Other		30	1,738	20	714	1,004	20	1,142	
Elgin		**69,560**	**1,130**	**7**	**441**	**682**	**7**	**678**	**46,147**
Aylmer, t	M	5,260	67	—	16	51	—	22	
Dutton, vl		1,130	3	—	1	2	—	1	
Port Stanley, vl		1,920	14	—	4	10	—	4	
Rodney, vl		1,010	7	—	1	6	—	2	
St. Thomas, c	M	28,240	421	—	148	273	—	198	
West Lorne, vl		1,270	20	—	6	14	—	7	
Other		30,730	598	7	265	326	7	444	
Essex		**309,960**	**7,018**	**37**	**2,961**	**4,020**	**40**	**4,342**	**180,867**
Amherstburg, t	M	5,660	81	—	29	52	—	41	
Belle River, t		3,660	54	—	20	34	—	25	
Essex, t	M	6,530	63	—	21	42	—	22	
Harrow, t		2,350	34	—	6	28	—	10	
Kingsville, t	M	5,260	44	—	19	25	—	23	
Leamington, t	M	12,960	248	2	68	178	2	94	
St. Clair Beach, vl	M	3,270	16	—	5	11	—	5	
Tecumseh, t		6,750	103	—	31	72	—	42	
Windsor, c	M	190,440	4,702	15	1,963	2,724	15	2,827	
Other		73,090	1,673	20	799	854	23	1,253	
Frontenac		**110,490**	**2,555**	**12**	**913**	**1,630**	**12**	**1,296**	**68,650**
Kingston, c	M	52,540	1,220	2	427	791	2	564	
Other		57,950	1,335	10	486	839	10	732	
Glengarry		**20,350**	**532**	**2**	**195**	**335**	**2**	**299**	**13,523**
Alexandria, t	M	3,210	63	—	15	48	—	19	
Other		17,140	469	2	180	287	2	280	
Grenville		**27,470**	**564**	**10**	**199**	**355**	**12**	**322**	**18,335**
Cardinal, vl	M	1,730	1	—	—	1	—	—	
Kemptville, t	M	2,330	23	—	6	17	—	6	
Prescott, t	M	4,620	82	—	23	59	—	24	
Other		18,790	458	10	170	278	12	292	

Table 4.1 **Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1985**

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Persons Injured	Vehicle Registrations
Grey		**74,400**	**1,346**	**14**	**518**	**814**	**16**	**821**	**43,631**
Dundalk, vl		1,270	11	—	6	5	—	7	
Durham, t	M	2,460	28	—	10	18	—	12	
Hanover, t	M	6,450	97	—	27	70	—	43	
Markdale, vl		1,280	8	—	2	6	—	2	
Meaford, t	M	4,390	33	—	8	25	—	9	
Owen Sound, c	M	20,020	242	1	93	148	1	115	
Thornbury, t	M	1,460	6	—	1	5	—	1	
Other		37,070	921	13	371	537	15	632	
Haldimand-Norfolk	**M**	**90,180**	**1,622**	**21**	**589**	**1,012**	**25**	**907**	**63,551**
Delhi, twp		15,190	100	1	33	66	1	48	
Dunnville, t		11,320	168	2	53	113	2	79	
Haldimand, t		17,190	104	1	41	62	1	66	
Nanticoke, c		20,090	271	6	96	169	7	150	
Norfolk, twp		11,120	25	—	16	9	—	22	
Simcoe, t		14,480	254	—	66	188	—	94	
Other		790	700	11	284	405	14	448	
Haliburton		**11,770**	**360**	**8**	**123**	**229**	**9**	**223**	**8,084**
Halton	**M**	**265,400**	**5,241**	**26**	**1,864**	**3,351**	**34**	**2,732**	**169,589**
Burlington, c		119,710	1,540	5	572	963	6	818	
Halton Hills, t		36,180	521	3	168	350	3	234	
Milton, t		30,540	548	4	194	350	5	297	
Oakville, t		78,960	1,133	4	400	729	4	557	
Other		10	1,499	10	530	959	16	826	
Hamilton-Wentworth	**M**	**417,870**	**8,683**	**37**	**3,646**	**5,000**	**43**	**5,393**	**225,536**
Ancaster, t		14,920	171	1	66	104	1	95	
Dundas, t		20,290	255	1	100	154	1	152	
Flamborough, twp		25,440	284	3	107	174	4	174	
Glanbrook, twp		9,990	49	—	20	29	—	30	
Hamilton, c		307,770	5,891	13	2,545	3,333	13	3,594	
Stoney Creek, t		39,450	499	2	221	276	6	340	
Other		10	1,534	17	587	930	19	1,008	
Hastings		**108,680**	**2,312**	**19**	**862**	**1,431**	**25**	**1,265**	**72,111**
Bancroft, vl		2,360	28	—	12	16	—	14	
Belleville, c	M	35,300	730	2	226	502	2	310	
Deseronto, t	M	1,730	13	—	2	11	—	2	
Frankford, vl		1,960	13	—	7	6	—	10	
Madoc, vl		1,250	17	—	4	13	—	5	
Marmora, vl		1,320	12	—	5	7	—	6	
Stirling, vl	M	1,680	17	—	5	12	—	5	
Trenton, c	M	15,230	321	—	94	227	—	120	
Tweed, vl	M	1,570	25	—	5	20	—	11	
Other		46,280	1,136	17	502	617	23	782	

Table 4.1 **Continued**

Location		Estimated Population (1983)	Class of Accident: Total Accidents	Fatal	Personal Injury	Property Damage	Persons: Killed	Injured	Vehicle Registrations
Huron		**56,310**	**974**	**12**	**348**	**614**	**12**	**572**	**34,210**
Clinton, t	M	3,080	54	—	14	40	—	20	
Exeter, t	M	3,790	56	—	19	37	—	25	
Goderich, t	M	7,330	111	—	37	74	—	48	
Seaforth, t	M	2,130	26	—	7	19	—	11	
Wingham, t	M	2,910	39	—	6	33	—	8	
Other		37,070	688	12	265	411	12	460	
Kenora		**60,520**	**1,214**	**13**	**379**	**822**	**14**	**582**	**31,154**
Dryden, t	M	6,630	96	—	21	75	—	27	
Keewatin, t		1,840	28	—	7	21	—	8	
Kenora, t	M	9,600	190	3	52	135	3	86	
Sioux Lookout, t		3,080	39	—	9	30	—	10	
Other		39,370	861	10	290	561	11	451	
Kent		**105,650**	**2,182**	**19**	**905**	**1,258**	**22**	**1,283**	**72,074**
Blenheim, t		4,110	51	1	16	34	2	21	
Chatham, c	M	41,540	835	1	353	481	1	475	
Dresden, t	M	2,550	29	—	5	24	—	9	
Ridgetown, t		3,040	28	—	7	21	—	8	
Tilbury, t	M	4,280	58	—	20	38	—	27	
Wallaceburg, t	M	11,560	219	—	77	142	—	107	
Wheatley, vl		1,630	9	—	4	5	—	5	
Other		36,940	953	17	423	513	19	631	
Lambton		**126,970**	**2,455**	**10**	**917**	**1,528**	**12**	**1,371**	**78,192**
Forest, t		2,760	19	—	3	16	—	3	
Petrolia, t	M	4,310	45	—	9	36	—	11	
Point Edward, vl	M	2,420	39	—	15	24	—	27	
Sarnia, c	M	50,740	1,176	2	430	744	3	613	
Watford, vl		1,450	15	—	2	13	—	2	
Wyoming, vl		1,730	15	—	6	9	—	10	
Other		63,560	1,146	8	452	686	9	705	
Lanark		**47,230**	**1,053**	**7**	**348**	**698**	**10**	**529**	**30,883**
Almonte, t		3,990	34	—	7	27	—	9	
Carleton Place, t	M	5,850	86	—	26	60	—	38	
Perth t	M	5,800	90	—	32	58	—	40	
Smiths Falls, t	M	8,910	224	—	61	163	—	83	
Other		22,680	619	7	222	390	10	359	
Leeds		**54,570**	**1,207**	**17**	**452**	**738**	**20**	**682**	**33,606**
Brockville, c	M	20,270	400	2	138	260	2	179	
Gananoque, t	M	4,910	62	—	19	43	—	28	
Other		29,390	745	15	295	435	18	475	
Lennox & Addington		**33,980**	**657**	**9**	**251**	**397**	**9**	**397**	**18,411**
Bath, vl		1,100	3	—	1	2	—	1	
Napanee, t	M	4,920	90	—	37	53	—	56	
Other		27,960	564	9	213	342	9	340	
Manitoulin		**11,090**	**253**	**1**	**101**	**151**	**3**	**163**	**6,236**
Little Current, t		1,520	10	—	2	8	—	4	
Other		9,570	243	1	99	143	3	159	

Table 4.1 **Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1985**

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Injured	Vehicle Registrations
Middlesex		**322,910**	**6,958**	**34**	**2,937**	**3,987**	**41**	**4,256**	**191,038**
Glencoe, vl		1,670	14	—	4	10	—	4	
London, c	M	259,050	5,259	14	2,248	2,997	15	3,147	
Lucan, vl		1,660	11	—	6	5	—	7	
Parkhill, t		1,370	6	—	2	4	—	4	
Strathroy, t	M	8,890	96	—	30	66	—	41	
Other		50,270	1,572	20	647	905	26	1,053	
Muskoka		**39,370**	**1,168**	**18**	**401**	**749**	**20**	**661**	**26,722**
Bracebridge, t		9,400	105	—	24	81	—	31	
Georgian Bay, twp		2,070	1	—	—	1	—	—	
Gravenhurst, t		8,830	78	—	22	56	—	33	
Huntsville, t		11,700	104	—	41	63	—	54	
Lake of Bays, twp		2,160	6	—	3	3	—	4	
Muskoka Lakes, twp		5,070	4	—	3	1	—	6	
Other		140	870	18	308	544	20	533	
Niagara	**M**	**371,320**	**8,037**	**45**	**2,915**	**5,077**	**52**	**4,189**	**223,115**
Fort Erie, t		24,330	423	1	150	272	1	207	
Grimsby, t		15,990	240	1	81	158	1	112	
Lincoln, t		14,280	186	2	83	101	2	124	
Niagara Falls, c		71,570	1,434	5	509	920	6	739	
Niagara-on-the-Lake, t		12,240	189	—	86	103	—	118	
Pelham, t		11,430	113	1	43	69	1	68	
Port Colborne, c		19,150	280	1	100	179	1	142	
St. Catharines, c		124,670	2,158	3	792	1,363	3	1,037	
Thorold, c		15,650	195	2	67	126	3	99	
Wainfleet, twp		6,040	33	—	11	22	—	22	
Welland, c		45,950	896	3	327	566	4	463	
West Lincoln, twp		10,020	45	2	15	28	2	19	
Other		—	1,845	24	651	1,170	28	1,039	
Nipissing		**80,380**	**1,548**	**11**	**631**	**906**	**12**	**978**	**41,235**
Mattawa, t		2,590	26	—	8	18	—	8	
North Bay, c	M	51,230	716	1	293	422	1	396	
Sturgeon Falls, t	M	5,940	66	—	25	41	—	44	
Other		20,620	740	10	305	425	11	530	
Northumberland		**66,000**	**1,542**	**24**	**631**	**887**	**29**	**991**	**31,296**
Brighton, t		3,170	29	—	9	20	—	13	
Campbellford, t		3,420	41	—	12	29	—	16	
Cobourg, t	M	11,510	240	3	96	141	3	132	
Colborne, vl		1,850	19	—	8	11	—	10	
Port Hope, t	M	10,200	101	—	40	61	—	54	
Other		35,850	1,112	21	466	625	26	766	

Table 4.1 Continued

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Injured	Vehicle Registrations
Ottawa-Carleton		**571,710**	**13,993**	**51**	**4,429**	**9,513**	**56**	**6,141**	**316,704**
Cumberland, twp		17,510	111	2	44	65	2	77	
Gloucester, c	M	82,210	890	6	323	561	6	466	
Goulbourn, twp		9,970	93	—	38	55	—	56	
Kanata, c		22,020	318	1	116	201	1	164	
Nepean, c	M	89,280	1,310	4	396	910	4	561	
Osgoode, twp		9,680	172	1	68	103	1	N.A.	
Ottawa, c	M	300,070	8,014	16	2,406	5,592	16	3,159	
Rideau, twp		9,360	70	—	24	46	—	37	
Rockcliffe Park, vl		1,870	14	—	2	12	—	3	
Vanier, c		19,340	431	—	138	293	—	185	
West Carleton, twp		10,400	57	—	21	36	—	32	
Other		—	2,513	21	853	1,639	26	1,401	
Oxford		**92,696**	**1,811**	**12**	**667**	**1,132**	**16**	**1,044**	**54,976**
East Zorra-Tavistock, twp		7,170	16	—	3	13	—	3	
Ingersoll, t	M	8,540	135	1	38	96	1	42	
Norwich, twp	M	9,730	22	—	9	13	—	12	
South-West Oxford, twp		8,290	2	—	—	2	—	—	
Tillsonburg, t	M	10,700	159	—	57	102	—	89	
Woodstock, c	M	26,530	499	—	184	315	—	263	
Zorra, twp		8,200	2	—	2	—	0	2	
Other		6,776	976	11	374	591	15	633	
Parry Sound		**34,230**	**996**	**16**	**333**	**647**	**20**	**624**	**22,944**
Parry Sound, t	M	6,050	67	—	19	48	—	24	
Powassan, t		1,150	6	—	1	5	—	2	
South River, vl		1,130	8	—	1	7	—	1	
Other		25,900	915	16	312	587	20	597	
Peel	**M**	**535,260**	**11,375**	**57**	**4,364**	**6,954**	**62**	**6,647**	**347,881**
Brampton, c		167,540	2,494	13	975	1,506	14	1,448	
Caledon, t		28,410	644	10	263	371	13	420	
Mississauga, c		339,320	5,641	18	2,090	3,533	18	3,019	
Other		—	2,596	16	1,036	1,544	17	1,760	
Perth		**66,070**	**1,267**	**11**	**434**	**822**	**13**	**678**	**40,376**
Listowel, t	M	5,000	70	—	13	57	—	21	
Milverton, vl	M	1,500	12	—	2	10	—	2	
Mitchell, t	M	2,800	37	—	7	30	—	9	
St. Marys, t	M	4,910	72	1	16	55	1	20	
Stratford, c	M	26,410	494	—	166	328	—	232	
Other		25,450	582	10	230	342	12	394	
Peterborough		**103,630**	**2,084**	**8**	**813**	**1,263**	**10**	**1,249**	**59,753**
Havelock, vl		1,410	13	—	4	9	—	8	
Lakefield, vl	M	2,420	38	—	11	27	—	13	
Norwood, vl		1,300	7	—	0	7	—	0	
Peterborough, c	M	61,160	2	—	1	1	—	1	
Other		37,340	2,024	8	797	1,219	10	1,227	

Table 4.1 **Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1985**

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Persons Injured	Vehicle Registrations
Prescott		**31,060**	**668**	**9**	**261**	**398**	**13**	**401**	**17,795**
Alfred, vl		1,040	11	—	4	7	—	5	
Hawkesbury, t	M	9,970	149	—	44	105	—	54	
L'Orignal, vl		1,980	9	—	2	7	—	3	
Vankleek Hill, t		1,870	20	—	4	16	—	4	
Other		16,200	479	9	207	263	13	335	
Prince Edward		**22,460**	**429**	**3**	**153**	**273**	**3**	**220**	**14,553**
Picton, t	M	4,340	77	—	27	50	—	35	
Wellington, vl		1,100	11	—	3	8	—	3	
Other		17,020	341	3	123	215	3	182	
Rainy River		**23,000**	**521**	**2**	**158**	**361**	**2**	**224**	**14,897**
Fort Frances, t	M	9,050	194	1	59	134	1	90	
Rainy River, t		1,080	14	—	5	9	—	11	
Other		12,870	313	1	94	218	1	123	
Renfrew		**88,240**	**1,549**	**17**	**557**	**975**	**21**	**919**	**55,331**
Arnprior, t	M	5,870	58	1	24	33	1	40	
Barry's Bay, vl		1,230	18	—	3	15	—	4	
Chalk River, vl		1,010	1	—	0	1	—	0	
Deep River, t	M	5,100	10	—	6	4	—	6	
Eganville, vl		1,250	20	—	3	17	—	4	
Pembroke, c	M	14,110	238	1	73	164	1	99	
Petawawa, vl		5,560	14	—	4	10	—	5	
Renfrew, t	M	8,360	109	—	41	68	—	56	
Other		45,750	1,081	15	403	663	19	705	
Russell		**23,030**	**467**	**4**	**192**	**271**	**5**	**285**	**27,770**
Casselman, vl		1,740	12	—	5	7	—	6	
Rockland, t		3,980	42	—	18	24	—	21	
Other		17,310	413	4	169	240	5	258	
Simcoe		**232,230**	**5,353**	**37**	**1,859**	**3,457**	**44**	**2,838**	**136,524**
Alliston, t	M	4,970	69	—	17	52	—	26	
Barrie, c	M	40,290	1,018	5	303	710	5	438	
Beeton, vl		2,170	15	—	3	12	—	3	
Bradford, t	M	8,580	102	—	30	72	—	34	
Collingwood, t	M	12,510	281	—	85	196	—	119	
Creemore, vl		1,230	10	—	1	9	—	1	
Elmvale, vl		1,190	9	—	2	7	—	3	
Midland, t	M	12,370	231	1	87	143	1	116	
Orillia, c	M	23,850	282	1	94	187	1	135	
Penetanguishene, t	M	5,280	86	—	23	63	—	26	
Port McNicoll, vl		2,060	20	—	11	9	—	12	
Stayner, t		2,570	31	—	10	21	—	15	
Tottenham, vl		3,150	21	1	4	16	1	5	
Victoria Harbour, vl		1,080	9	—	1	8	—	1	
Wasaga Beach, t		4,610	113	—	49	64	—	70	
Other		106,320	3,056	29	1,139	1,888	36	1,834	

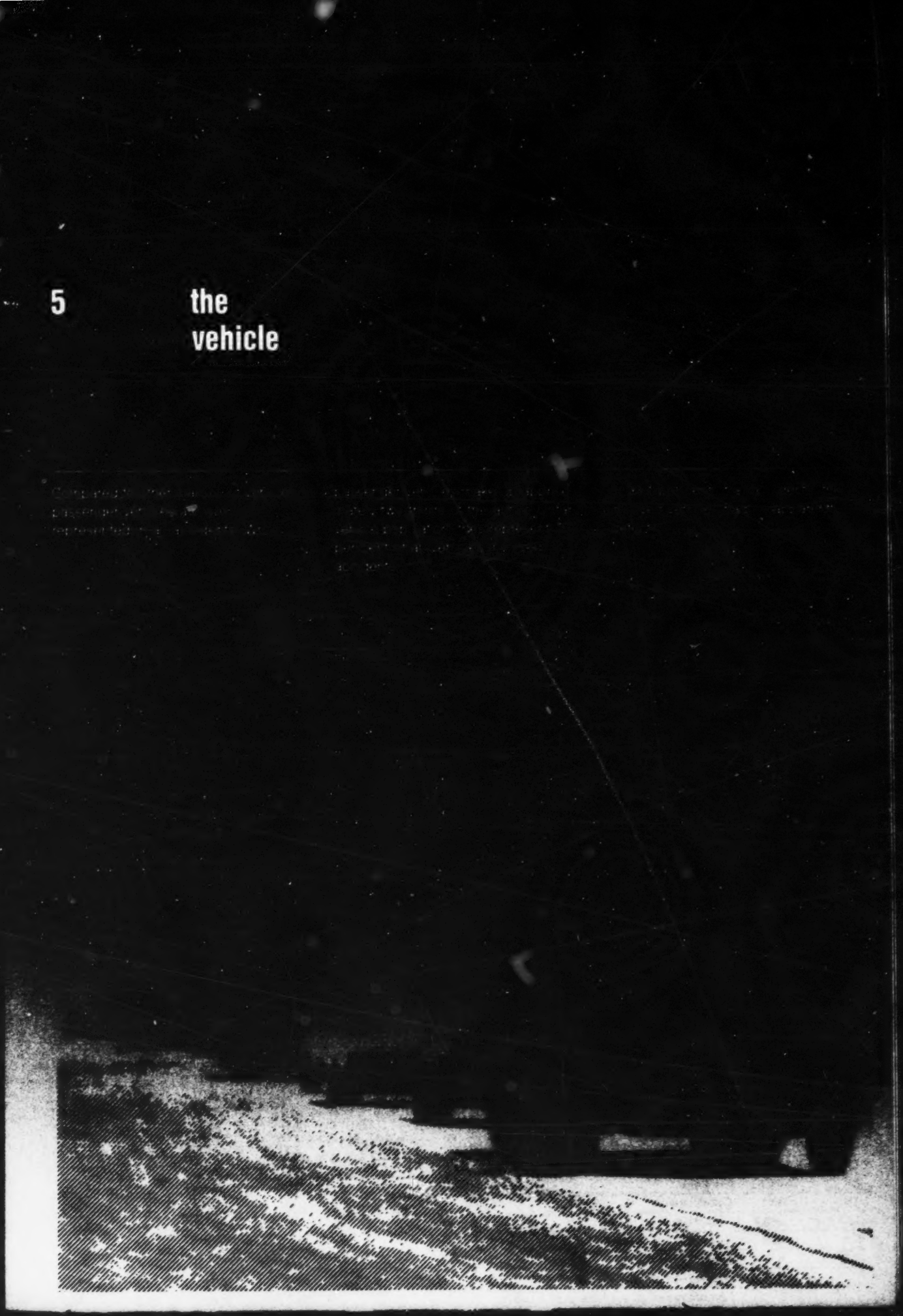
Table 4.1 **Continued**

Location		Estimated Population (1983)	Class of Accident: Total Accidents	Fatal	Personal Injury	Property Damage	Persons: Killed	Injured	Vehicle Registrations
Stormont		**62,410**	**1,284**	**6**	**488**	**790**	**6**	**732**	**34,305**
Cornwall, c	M	46,390	949	3	349	597	3	501	
Other		16,020	335	3	139	193	3	231	
Sudbury		**27,080**	**1,016**	**19**	**376**	**621**	**22**	**653**	**144,203**
Espanola, t	M	5,830	51	—	17	34	—	21	
Massey, t		1,260	7	—	1	6	—	1	
Other		19,990	958	19	358	581	22	631	
Sudbury Regional									
Municipality	**M**	**158,790**	**2,617**	**14**	**1,045**	**1,558**	**15**	**1,553**	**Included in**
Capreol, t		3,840	23	—	9	14	—	11	**District of**
Nickel Centre, t		12,300	58	—	32	26	—	55	**Sudbury**
Onaping Falls, t		6,160	30	—	12	18	—	13	
Rayside-Balfour, t		15,000	80	1	37	42	1	49	
Sudbury, c		90,440	2,079	7	792	1,280	7	1,186	
Valley East, t		20,850	282	5	135	142	6	202	
Walden, t		10,200	65	1	28	36	1	37	
Thunder Bay		**154,270**	**4,250**	**27**	**1,291**	**2,932**	**29**	**1,865**	**98,554**
Geraldton, t		2,890	29	—	6	23	—	7	
Thunder Bay, c	M	112,790	2,871	9	864	1,998	9	1,171	
Other		36,590	1,350	18	421	911	20	687	
Timiskaming		**41,480**	**823**	**5**	**282**	**536**	**6**	**433**	**23,130**
Cobalt, t		1,730	11	—	4	7	—	4	
Englehart, t		1,700	13	—	4	9	—	4	
Haileybury, t		5,000	31	—	9	22	—	20	
Kirkland Lake, t	M	12,160	165	1	45	119	1	59	
New Liskeard, t	M	5,630	82	—	16	66	—	28	
Other		15,260	521	4	204	313	5	318	
Toronto, Metropolitan	**M**	**2,139,070**	**39,084**	**85**	**17,160**	**21,839**	**89**	**24,337**	**Included in**
Etobicoke, c		299,200	4,457	13	1,936	2,508	14	2,763	**Regional**
Scarborough, c		462,800	6,902	19	3,052	3,831	19	4,528	**Municipality**
Toronto, c		584,310	15,146	27	6,443	8,676	28	8,631	**of York**
York, c		133,390	1,598	1	712	885	1	986	
York E., borough		101,070	1,155	3	481	671	3	663	
York, N., c		558,300	9,826	22	4,536	5,268	24	6,766	
Victoria		**50,110**	**1,043**	**12**	**393**	**638**	**15**	**643**	**31,365**
Bobcaygeon, vl		1,660	14	—	4	10	—	5	
Fenelon Falls, vl		1,740	24	—	6	18	—	9	
Lindsay, t	M	13,920	235	—	94	141	—	136	
Other		32,790	770	12	289	469	15	493	
Waterloo	**M**	**314,270**	**6,731**	**31**	**2,611**	**4,089**	**38**	**3,693**	**186,348**
Cambridge, c		79,290	2	—	2	—	—	3	
Kitchener, c		143,380	2,674	4	1,030	1,640	4	1,391	
North Dumfries, twp		5,080	52	—	23	29	—	38	
Waterloo, c		51,270	1,017	3	391	623	3	530	
Wellesley, twp		7,020	25	—	10	15	—	16	
Wilmot, twp		11,280	89	2	31	56	2	53	
Woolwich, twp		16,960	110	3	47	60	4	79	
Other		--	2,762	19	1,077	1,666	25	1,583	

Table 4.1 **Place of Accident — Estimated Population, Class of Accident, Persons Killed, Persons Injured and Vehicle Registration 1985**

Location		Estimated Population (1983)	Class of Accident Total Accidents	Fatal	Personal Injury	Property Damage	Persons Killed	Persons Injured	Vehicle Registrations
Wellington		**133,420**	**2,756**	**33**	**1,107**	**1,616**	**39**	**1,695**	**82,856**
Arthur, vl		1,740	14	—	7	7	—	11	
Elora, vl		2,700	23	—	8	15	—	11	
Erin, vl		2,470	16	—	1	15	—	1	
Fergus, t	M	6,160	82	1	27	54	2	36	
Guelph, c	M	73,060	1,061	7	489	565	7	675	
Harriston, t	M	2,010	25	—	7	18	—	14	
Mount Forest, t	M	3,560	53	—	8	45	—	10	
Palmerston, t	M	2,030	17	—	7	10	—	10	
Other		39,690	1,465	25	553	887	30	927	
York	**M**	**281,820**	**4,014**	**22**	**1,446**	**2,546**	**25**	**2,177**	**1,266,895**
Aurora, t		17,530	326	4	108	214	4	159	
East Gwillimbury, t		13,730	94	1	37	56	1	73	
Georgina, twp		21,240	173	—	81	92	—	113	
King, twp		16,020	221	1	80	140	1	114	
Markham, t		89,300	1,181	2	408	771	2	612	
Newmarket, t		32,710	376	—	124	252	—	169	
Richmond Hill, t		39,930	543	3	186	354	3	286	
Vaughan, t		37,220	951	8	369	574	11	563	
Whitchurch-Stouffville, t		14,140	149	3	53	93	3	88	
Other York/Metro Toronto Provincial Highways		**130**	**9,486**	**38**	**3,742**	**5,706**	**46**	**5,943**	
Other							**Location not recorded**		**42,330**

5 the vehicle



5a. vehicles in accidents

Table 5.1 Type of Vehicle by Class of Accident 1985

Class of Driver Licence Required		Type of Vehicle	Class of Accident: Fatal	Personal Injury	Property Damage	Total
Passenger vehicles	G	Passenger car/station wagon	1,029	101,337	161,246	**263,612**
	G	Taxi/limousine	2	223	278	**503**
	G	Hearse	—	3	4	**7**
	G	Dune buggy	1	4	3	**8**
	F	Ambulance	—	51	78	**129**
	G	Fire department vehicle	—	5	6	**11**
	G	Police force vehicle	3	171	135	**309**
	G	Public utility emergency vehicle	—	1	—	**1**
	G	Other passenger vehicle	3	206	261	**470**
		Subtotal	**1,038**	**102,001**	**162,011**	**265,050**
		Percentage of all vehicles	**61.8**	**74.3**	**75.9**	**75.2**
		Percentage of all vehicles over 5 years	**62.8**	**75.0**	**76.9**	**76.2**
Passenger vehicles and trailers	G	P.V. and house trailer	—	11	34	**45**
	G	P.V. and boat trailer	1	26	81	**108**
	G	P.V. and tent trailer	—	11	32	**43**
	G	P.V. and utility trailer	—	26	64	**90**
	G	P.V. and other trailer	2	110	198	**310**
	G	Other P.V. and trailer	—	15	29	**44**
		Subtotal	**3**	**199**	**438**	**640**
		Percentage of all vehicles	**0.2**	**0.2**	**0.2**	**0.2**
		Percentage of all vehicles over 5 years	**0.3**	**0.2**	**0.2**	**0.2**
Trucks	D	Truck with concrete mixer	—	24	44	**68**
	D	Truck with stake or platform body	3	216	496	**715**
	D	Truck with tank body	1	45	103	**149**
	D	Truck with dump body	15	488	1,023	**1,526**
	G	Tow truck	—	89	209	**298**
	D	Tractor not pulling a trailer	7	91	149	**247**
	G	Pick-up truck	167	9,677	18,906	**28,750**
	G	Passenger van	21	1,290	2,291	**3,602**
	G	Delivery van	59	4,636	8,788	**13,483**
	G	Pick-up camper	—	2	7	**9**
	D	Fire truck	—	19	31	**50**
	D	Other truck	16	609	1,363	**1,988**
	G	Other truck	9	599	1,391	**1,999**
	D	Tow truck	—	7	20	**27**
		Subtotal	**298**	**17,792**	**34,282**	**52,911**
		Percentage of all vehicles	**17.7**	**12.9**	**16.3**	**15.0**
		Percentage of all vehicles over 5 years	**16.7**	**12.0**	**11.9**	**13.7**

Table 5.1 Continued

Class of Driver Licence Required		Type of Vehicle	Class of Accident: Fatal	Personal Injury	Property Damage	Total
Truck and	G	Pick-up and recreation trailer	1	6	17	**24**
trailer	G	Pick-up and recreation semi-trailer	—	6	6	**12**
	G	Pick-up and other semi-trailer	8	176	403	**587**
	D	Truck/trailer-dump	—	5	5	**10**
	D	Truck/trailer-frame	—	1	1	**2**
	D	Truck/trailer-tank	—	—	4	**4**
	D	Truck/trailer-stake or platform body	1	3	12	**16**
	D	Truck/trailer-van	—	—	1	**1**
	D	Truck and pole trailer	—	—	1	**1**
	G	Tow truck hauling a disabled vehicle	1	47	83	**131**
	D	Other truck/trailer	1	10	23	**34**
	G	Other truck/trailer	—	5	24	**29**
	A	Other truck/trailer	2	65	121	**188**
	D	Tow truck hauling a disabled vehicle	—	6	13	**19**
		Subtotal	**14**	**330**	**714**	**1,058**
		Percentage of all vehicles	**0.8**	**0.3**	**0.3**	**0.3**
		Percentage of all vehicles over 5 years	**0.5**	**0.2**	**0.3**	**0.3**
Tractor and	A	Tractor/semi-trailer-dump	6	56	84	**146**
semi-	A	Tractor/semi-trailer-frame	—	20	18	**38**
trailers	A	Tractor/semi-trailer-tank	4	59	87	**150**
	A	Tractor/semi-trailer-stake or platform	5	31	77	**113**
	A	Tractor/semi-trailer-van	14	133	253	**400**
	A	Tractor/semi-trailer-concrete mixer	—	3	9	**12**
	A	Tractor/semi-trailer float	6	110	245	**361**
	A	Tractor/semi-trailer-car transport	—	11	13	**24**
	A	Tractor/semi-trailer-other	66	1,381	3,192	**4,639**
	A	Tractor/semi-trailer and pup-dump	1	6	13	**20**
	A	Tractor/semi-trailer and pup-frame	—	3	2	**5**
	A	Tractor/semi-trailer and pup-tank	—	10	6	**16**
	A	Tractor/semi-trailer and pup-stake or platform	—	1	2	**3**
	A	Tractor/semi-trailer and pup-van	2	2	10	**14**
	A	Tractor/semi-trailer and pup-other	1	43	74	**118**
	A	Tractor/semi-trailer and semi-trailer-tank	—	3	4	**7**
	A	Tractor/semi-trailer/semi-trailer stake or platform	—	3	6	**9**
	A	Tractor/semi-trailer and semi-trailer-van	—	1	3	**4**
	A	Tractor/semi-trailer and semi-trailer-other	—	34	53	**87**
		Subtotal	**105**	**1,910**	**4,151**	**6,166**
		Percentage of all vehicles	**6.3**	**1.4**	**2.0**	**1.8**
		Percentage of all vehicles over 5 years	**6.4**	**1.4**	**1.8**	**1.6**
Bus	C	Transit – intercity	2	38	91	**131**
	C	Transit – urban	7	910	1,225	**2,142**
	F	Coach – intercity	—	19	26	**45**
	F	Coach – urban	1	22	44	**67**
		Subtotal	**10**	**989**	**1,386**	**2,385**
		Percentage of all vehicles	**0.6**	**0.7**	**0.6**	**0.7**
		Percentage of all vehicles over 5 years	**0.6**	**0.8**	**0.7**	**0.7**

Table 5.1 Type of Vehicle by Class of Accident 1985

Class of Driver Licence Required		Type of Vehicle	Class of Accident			Total
			Fatal	Personal Injury	Property Damage	
School vehicles	E	School bus or school van — seating capacity 10-23	—	88	132	**220**
	B	School bus — seating capacity 24 or over	5	233	485	**723**
	G	School van — seating capacity under 10	—	10	11	**21**
	G	Station wagon	—	—	—	**—**
	C	Other bus	1	23	55	**79**
		Subtotal	**6**	**354**	**683**	**1,043**
		Percentage of all vehicles	**0.4**	**0.3**	**0.3**	**0.3**
		Percentage of all vehicles over 5 years	**0.3**	**0.3**	**0.3**	**0.3**
Other motor vehicles	G	Motor home	2	33	71	**106**
	M	Motorcycle	122	5,714	622	**6,458**
	G	Moped	1	28	—	**29**
		Subtotal	**125**	**5,775**	**693**	**6,593**
		Percentage of all vehicles	**7.4**	**4.2**	**0.3**	**1.9**
		Percentage of all vehicles over 5 years	**7.5**	**4.4**	**0.3**	**1.8**
Non-motor vehicles	G	Snowmobile	4	90	37	**131**
		Farm tractor	3	96	165	**264**
		Tractor or construction equipment	1	76	228	**305**
		Train	14	76	79	**169**
		Street car	—	82	211	**293**
		Bicycle	46	4,721	56	**4,823**
		Snow Plow	—	8	25	**33**
		Go-cart	—	2	—	**2**
		Horse and buggy	—	5	5	**10**
		Other	—	9	19	**28**
		Subtotal	**68**	**5,165**	**825**	**6,058**
		Percentage of all vehicles	**4.1**	**3.8**	**0.4**	**1.7**
		Percentage of all vehicles over 5 years	**4.4**	**3.8**	**0.4**	**1.6**
		Unknown	**12**	**2,730**	**7,538**	**10,280**
		Percentage of all vehicles	**0.7**	**2.0**	**3.5**	**2.9**
		Percentage of all vehicles over 5 years	**0.6**	**2.0**	**4.3**	**3.6**
		Total	**1,679**	**137,245**	**213,260**	**352,184**

Table 5.2 Condition of Vehicle by Class of Accident 1985

Condition of Vehicle	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
No Apparent Defect	1,454	128,928	197,387	**327,769**
Service Brakes Defective	21	657	638	**1,316**
Steering Defective	1	148	168	**317**
Tire Puncture or Blow Out	2	374	492	**868**
Tire Tread Insufficient	31	355	349	**735**
Headlamps Defective	4	108	60	**172**
Other Lamps or Reflectors Defective	7	157	277	**441**
Engine Controls Defective	2	209	410	**621**
Wheels or Suspension Defective	1	97	252	**350**
Vision Obscured	—	70	151	**221**
Trailer Hitch Defective	1	20	94	**115**
Other Defects	20	712	1,219	**1,951**
Unknown	135	5,410	11,763	**17,308**
Total	**1,679**	**137,245**	**213,260**	**352,184**

Of the 7,107 vehicles with defects involved in accidents, the most common of these were service brakes defective (18.5%), tire puncture or blow out (12.2%) and insufficient tire tread (10.3%)

Table 5.3 Model Year of Vehicle by Class of Accident 1985

Model Year of Vehicle	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
1986	9	776	1,371	**2,156**
1985	154	11,857	18,719	**30,730**
1984	208	15,277	23,781	**39,266**
1983	109	10,046	15,487	**25,642**
1982	111	9,524	14,219	**23,854**
1981	126	11,759	18,702	**30,587**
1980	135	11,380	18,169	**29,684**
1979	144	11,302	18,478	**29,924**
1978	125	11,135	17,898	**29,158**
1977	123	9,905	15,578	**25,606**
1976 and Earlier	367	26,118	41,824	**68,309**
Unknown	68	8,166	9,034	**17,268**
Total	**1,679**	**137,245**	**213,260**	**352,184**

Table 5.4 Insurance Status of Vehicle by Class of Accident 1985

Insurance	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
Insured	1,551	126,502	200,802	**328,855**
Not Insured	68	3,956	1,477	**5,501**
Unknown	60	6,787	10,981	**17,828**
Total	**1,679**	**137,245**	**213,260**	**352,184**

5b. putting the vehicle in context

Table 5.5 Vehicle Population by Type of Vehicle 1985

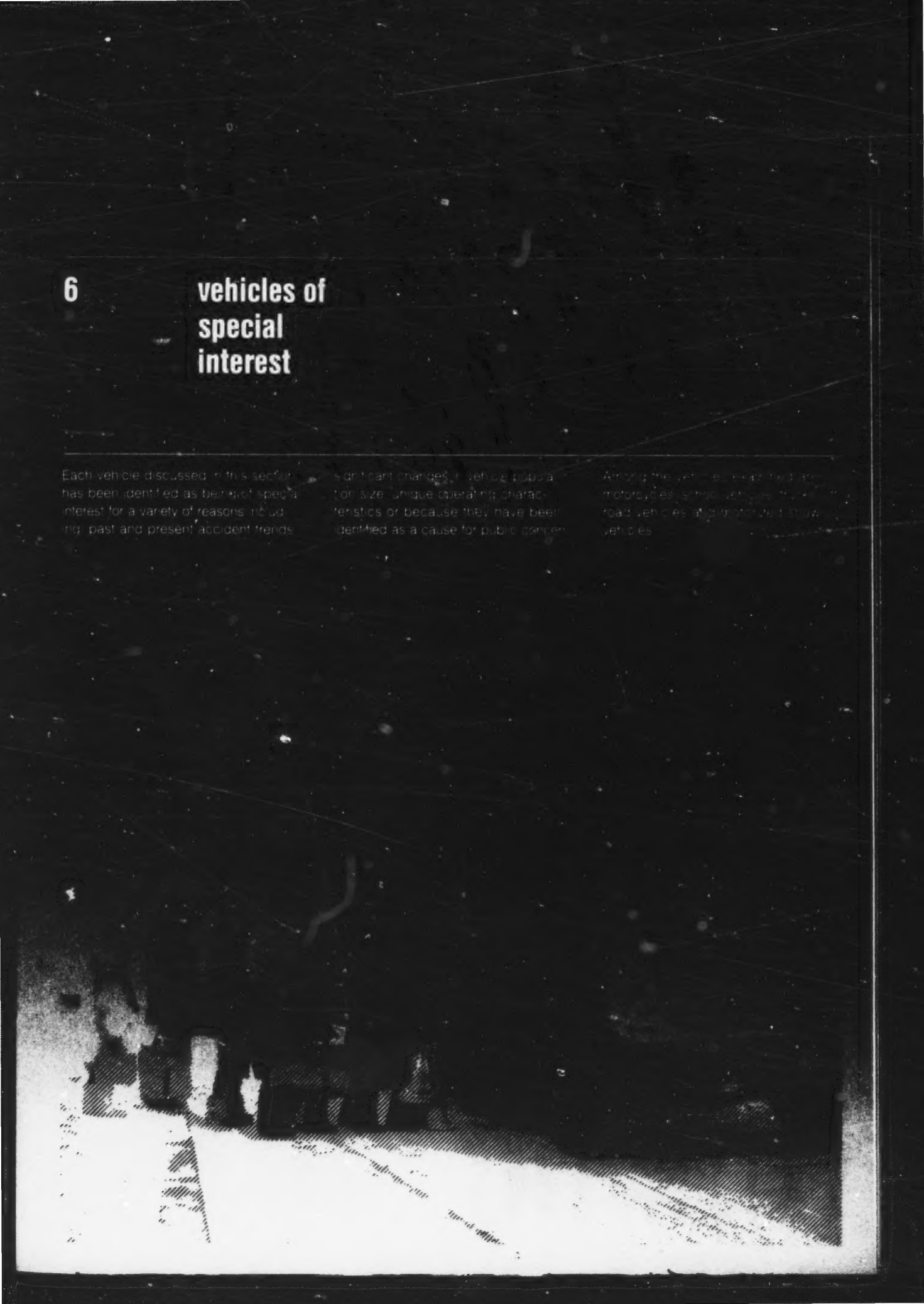
Vehicle Class	Active
Passenger	4,093,730
Motorcycle	149,441
Moped	7,637
Commercial	904,111
Bus	16,635
School Bus	8,364
Motorized Snow Vehicle	209,290
Off-Road Vehicle	43,545
Road Building Machinery	957
Permanent Apparatus	4,028
Farm Trucks	33,489
Total	**5,471,227**

Table 5.6 Selected Types of Vehicles by Model Year 1985

Vehicle Class	Model Years											Total
	86	85	84	83	82	81	80	79	78	77	76+	
Passenger	113,522	436,903	406,299	285,449	259,976	344,280	350,007	359,914	366,782	315,620	855,038	**4,093,790**
Motorcycle	165	7,167	16,809	19,125	22,310	14,187	10,006	10,068	11,298	7,339	30,967	**149,441**
Moped	NA	95	132	395	475	484	328	360	309	484	4,575	**7,637**
Commercial	21,311	87,740	76,122	46,539	43,196	71,034	67,086	85,909	75,792	73,970	255,410	**904,111**
Bus	152	2,520	2,331	1,961	1,957	2,412	2,162	2,130	2,198	2,044	11,491	**31,358**
Motorized Snow Vehicle	4,802	6,961	5,368	5,983	9,283	12,285	23,713	20,548	13,866	13,128	93,353	**209,290**
Off-Road Vehicle	2,424	8,945	12,079	8,822	3,972	1,784	999	871	728	550	2,371	**43,545**

6 vehicles of special interest

Each vehicle discussed in this section has been identified as being of special interest for a variety of reasons including past and present accident trends, significant changes in vehicle population size, unique operating characteristics or because they have been identified as a cause for public concern. Among the vehicles discussed are motorcycles, school buses, [illegible] road vehicles and [illegible] vehicles.



6a. motorcycles

Table 6.1 **Motorcyclists Killed and Injured 1981-1985**

Year	Drivers		Passengers	
	Killed	Injured	Killed	Injured
1981	94	4,303	13	886
1982	104	4,711	22	930
1983	95	5,069	18	941
1984	116	5,272	19	1,017
1985	97	5,327	23	920

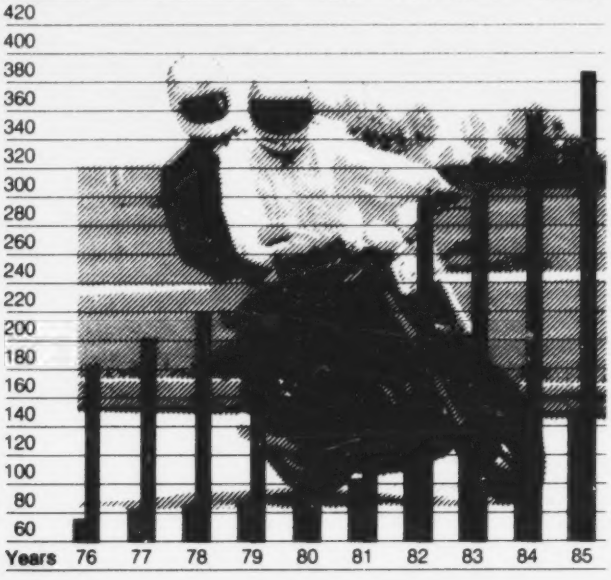
Table 6.2 **Selected Factors Relevant to Fatal Motorcycle Accidents 1985**

Factors	%
Unlicensed Motorcycle Drivers	37
Under 25 Years Old	65
Valid "M" Licence Less Than One Year	15
Alcohol Used (Driver Fatalities)	52
Helmet Not Worn (Fatalities)	9
Motorcycle Driver Error	
Speed Too Fast/Lost Control	56
Other Error	16
Single Vehicle Accidents	45
Day/Night	53/47
Weekend	42

Unlicensed motorcycle drivers include operators with Class "G" (car) licences only, operators with suspended licences, and operators with no driver's licence at all.

Figure 6.1 **Registered Motorcycles and Licensed Motorcyclists 1976-1985**

The average annual percentage increase in licensed motorcyclists between 1976 and 1985 was 9.4%.



6b. school vehicles

Table 6.3 **Pupils Transported Daily, Total Accidents and Injury Rate Per 100,000 Pupils — School Years 1980/81-1984/85**

School Year	Pupils Transported Daily	Total Number of Accidents	Injury Rate per 100,000 Pupils	
			Fatal	Non-Fatal
1980/81	598 096	847	0 2	38
1981/82	597 331	861	0 2	45
1982/83	604 370	808	0 7	27
1983/84	602 898	900	0 3	39
1984/85	622 219	866	—	34

Table 6.4 **School Vehicle Type by Nature of School Vehicle Accident 1984/85**

School Vehicle Type	Nature of Accident				Total Number of Accidents	Five Year Total (1975/76-1984/85)
	Fatal	Pupil Injury	Non-pupil Injury	Property Damage		
School Bus	—	68	136	463	667	3,632
Van	—	17	65	115	197	617
Station Wagon	—	—	1	1	2	17
Other Buses	—	—	—	—	—	16
Total	**—**	**85**	**202**	**579**	**866**	**4,282**

Table 6.5 **School Vehicle Type by Pupil Action 1984/85**

School Vehicle Type	Accident Event						Total		Five Year Total 1975/76–1984/85	
	Crossing Road		Within School Vehicle		Other					
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
School Bus	—	6	—	154	—	17	—	177	17	953
Van	—	—	—	31	—	2	—	33	6	147
Station Wagon	—	—	—	—	—	—	—	—	—	5
Other Buses	—	—	—	—	—	—	—	—	—	—
Total	**—**	**6**	**—**	**185**	**—**	**19**	**—**	**210**	**23**	**1,105**

6c. trucks

Table 6.6 Class of Truck Accident 1981-1985

Year	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
1981	517	17,345	40,585	**58,447**
1982	375	15,896	38,780	**55,051**
1983	429	15,543	37,000	**52,972**
1984	381	17,486	41,953	**59,820**
1985	417	20,149	39,820	**60,386**
Total	**2,119**	**86,419**	**198,138**	**286,676**

Table 6.7 Driver Licence Class Required by Class of Truck Accident 1985

Driver Licence Required	Class of Accident			Total
	Fatal	Personal Injury	Property Damage	
G	265	16,612	32,203	**49,080**
D	44	1,548	3,319	**4,911**
A	108	1,989	4,298	**6,395**
Unknown	—	117	134	**251**
Total	**417**	**20,266**	**39,954**	**60,637**

Drivers with a Class G licence may operate light and medium trucks, weighing up to 11,000 kilograms; drivers with a Class D licence may operate heavy straight (non-articulated) trucks; and those with Class A licences may operate articulated, tractor/semi-trailer and truck-trailer combinations where the trailer is over 4,600 kilograms.

Table 6.8 Driver Class Required — Accidents, Registered Trucks and Accident Rate 1985

Driver Licence Required	Accidents	Registered Vehicles	Accident Rate
G	49,080	739,931	6.6
D	4,911	95,807	5.1
A	6,395	68,373	9.3
Unknown	251	—	—
Total	**60,637**	**904,111**	**6.7**

Table 6.9 Selected Factors Relevant to Truck Accidents 1985

Factors	Driver Licence Required		
	Class G	Class D	Class A
Driver Condition in Fatal Accidents:			
Alcohol Involved	31.4%	5.0%	3.9%
Driving Properly	42.5%	43.6%	50%
Single Vehicle	18.8%	16.2%	27.9%
Vehicle Defect Present	3.0%	6.9%	7.6%
Urban	65.6%	60.2%	36.0%
Daylight	70.5%	85.1%	69.1%

6d. off-road vehicles

Table 6.10 Accident Location by Off-Road Vehicle Drivers Killed and Injured 1983-1985

Location	Killed			Injured		
	1983	1984	1985	1983	1984	1985
On Highway	3	7	3	74	51	92
Off Highway	4	—	7	85	70	112
Total	**7**	**7**	**10**	**159**	**121**	**204**

Table 6.11 Accident Location by Off-Road Vehicle Passengers Killed and Injured 1983-1985

Location	Killed			Injured		
	1983	1984	1985	1983	1984	1985
On Highway	1	—	1	13	19	23
Off Highway	—	—	2	24	16	33
Total	**1**	**—**	**3**	**37**	**35**	**56**

The number of off-road vehicle passengers killed and injured appears high considering that the majority of off-road vehicles are not designed to carry passengers. In addition, although on-highway use of off-road vehicles is generally prohibited, nearly half of the accidents occurred there.

Table 6.12 Registered Off-Road Vehicles 1984-1985

Year	Vehicles Registered
1984	28,368
1985	43,545

Off-road vehicles were first required to be registered on June 1, 1984.

Table 6.13 Selected Factors Relevant to All Off-Road Vehicle Accidents 1985

Factors	%
Drivers Under 25 Years of Age	70
Alcohol Used	22
Speeding	38
Helmet Not Worn	44
Daytime	77
Three-Wheeled	67

6e. motorized snow vehicles

Table 6.14 Accident Location by Motorized Snow Vehicle Drivers Killed and Injured — Riding Seasons 1980/81-1984/85

Location	Killed					Injured				
	80/81	81/82	82/83	83/84	84/85	80/81	81/82	82/83	83/84	84/85
On Highway	9	18	4	14	8	209	299	109	193	159
Off Highway	6	5	5	8	5	175	204	116	149	130
Total	**15**	**23**	**9**	**22**	**13**	**384**	**503**	**225**	**342**	**289**

Table 6.15 Accident Location by Motorized Snow Vehicle Passengers Killed and Injured — Riding Seasons 1980/81-1984/85

Location	Killed					Injured				
	80/81	81/82	82/83	83/84	84/85	80/81	81/82	82/83	83/84	84/85
On highway	5	2	—	2	3	62	77	42	59	43
Off highway	1	—	2	—	1	48	42	37	42	41
Total	**6**	**2**	**2**	**2**	**4**	**110**	**119**	**79**	**101**	**84**

From 1980/81 to 1984/85, 65% of motorized snow vehicle operator fatalities and 75% of passenger fatalities occurred in on-highway accidents. During the same period, 56% of drivers and passengers injured were involved in on-highway accidents.

Table 6.16 Registered Motorized Snow Vehicles 1981-1985

Year	Registered Motorized Snow Vehicles
1981	170,976
1982	169,385
1983	NA*
1984	169,172
1985	209,290

*Not Available

Table 6.17 Selected Factors Relevant to All Motorized Snow Vehicle Accidents 1984/85

Factors	%
Unlicensed Operators	19
Rider Error: Speed too fast	31
Alcohol Used	21
Surface Condition: Icy or Packed Snow	69

7 conviction and suspension data

7a. conviction data

Table 7.1 Summary of Motor Vehicle Related Convictions 1985

Convictions	Number
Highway Traffic Act	1,025,178
Regulation H.T.A.	2,535
Criminal Code of Canada	46,881
Municipal By-Law	20,660
Motor Vehicle Accident Claim/Compulsory Insurance Act	20,351
Others	7,295
Total	**1,122,900**

Table 7.2 Motor Vehicle Convictions Related to the Highway Traffic Act 1985

Convictions	Number
Equipment	30,877
Administrative*	66,984
Seat Belt (Driver & Passenger)	49,809
Other Non-Pointable Convictions	896
Speeding (<16 km/h, non-pointable)	308,488
Pointable Speeding	357,064
Other Pointable Convictions (2-4 pt.)	179,304
Other Pointable Convictions (5-7 pt.)	20,923
Driving While Suspended	13,368
Total	**1,027,713**

*Non-moving, weight, vehicle registration, licence renewal, etc.

Table 7.3 Motor Vehicle Convictions Related to the Criminal Code 1985

Convictions	Number
Alcohol Related	44,109
Criminal Negligence	186
Fail to Remain at Accident	1,368
Driving While Disqualified	5
Dangerous Driving	1,213
Total	**46,881**

The most frequent type of traffic convictions registered under the Criminal Code were alcohol related (94.1%).

7b. suspension data

Table 7.4 Mandatory Suspensions Related to Criminal Code Convictions Issued 1985

	Suspension Periods			
Suspensions	**3 Months**	**6 Months**	**3 Years**	**Total***
Criminal Negligence (s. 203, 204)	30	10	2	**42**
Motor Manslaughter	—	—	—	**—**
Criminal Negligence (s. 233-1)	73	28	13	**114**
Fail to Remain (s. 233-2)	904	285	109	**1,298**
Dangerous Driving	853	193	61	**1,107**
Impaired Driving (s. 234)	12,151	4,339	1,454	**17,944**
Blood/Alcohol over .08	15,607	4,063	960	**20,630**
Failure to Provide Breath Sample	1,574	839	347	**2,760**
Failure to Provide Roadside Breath Sample	460	153	45	**658**
Total	**31,652**	**9,910**	**2,991**	**44,553**

*Total issued during the calendar year

New federal and Ontario provincial laws related to drinking and driving are not reflected in the current statistics because of their recent introduction (December, 1985).

With respect to Criminal Code suspensions issued each year, those issued for a second conviction in a five year period are approximately one-third of the number of first convictions.

Suspensions issued for third convictions (or more) are approximately one-third of the number of second convictions. This pattern of 'thirds' has held for the past several years.

Table 7.5 Mandatory Suspensions Related to Criminal Code Convictions at Year End 1985

	Suspension Periods			
Suspensions	**3 Months**	**6 Months**	**3 Years**	**Total***
Criminal Negligence (s. 203, 204)	43	27	7	**77**
Motor Manslaughter	—	—	—	**—**
Criminal Negligence (s. 233-1)	68	37	44	**149**
Fail to Remain (s. 233-2)	297	158	312	**767**
Dangerous Driving	482	147	202	**831**
Impaired Driving (s. 234)	3,841	2,555	4,231	**10,627**
Blood/Alcohol over .08	4,411	2,196	2,833	**9,440**
Failure to Provide Breath Sample	449	457	1,054	**1,960**
Failure to Provide Roadside Breath Sample	105	66	126	**297**
Total	**9,696**	**5,643**	**8,809**	**24,148**

*Total as of December 31, 1985

Table 7.6 Demerit Point Suspensions by Driver Age 1985

Driver Age	Demerit Point Suspensions		
	Probationary	Non-Probationary First Accumulation	Non-Probationary Second Accumulation
16	596	—	—
17	2,436	—	—
18	3,082	8	—
19	2,118	127	5
20-24	4,166	1,615	185
25-34	2,153	1,071	122
35-44	504	376	39
45-54	177	124	15
55-64	60	60	2
65-74	14	13	—
75+	4	3	—
Total	**15,310**	**3,397**	**368**

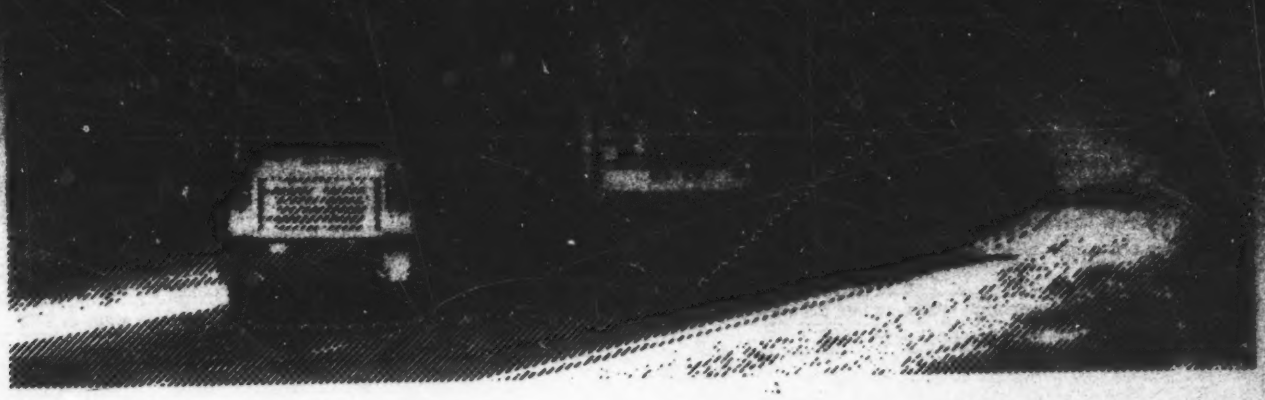
Newly licensed drivers are covered by the probationary licence system until they have successfully completed two one-year periods of suspension free driving. Probationary drivers are suspended for 30 days after accumulating 6 or more demerit points. Non-probationary drivers are suspended for 30 days on the first accumulation of 15 demerit points and are suspended for 6 months on the second accumulation of 15 points within 2 years.

Table 7.7 Criminal Code Suspensions by Driver Age 1985

Criminal Code Suspension	Driver Age							
	16-19	20-24	25-34	35-44	45-54	55-64	65+	Total
Criminal Negligence	21	54	53	20	6	2	—	**156**
Failure to Remain	128	375	413	214	98	62	—	**1,290**
Dangerous Driving	215	454	316	73	29	14	6	**1,107**
Impaired Driving	722	3,901	6,273	3,840	1,983	972	253	**17,944**
Blood/Alcohol over .08	1,180	5,655	7,217	3,494	1,893	936	255	**20,630**
Failure to Provide Breath Sample	49	445	1,078	735	327	107	19	**2,760**
Failure to Provide Roadside Breath Sample	16	143	223	172	78	20	6	**658**
Total	**2,331**	**11,027**	**15,573**	**8,548**	**4,414**	**2,113**	**539**	**44,545**

Twenty-five to 34 year olds received the highest number of criminal code convictions. As shown on Table 2.17 this group is also the largest in the driver population. The group receiving the second largest number of criminal code convictions were 16 to 24 year olds. The latter represent the third largest group in the driver population.

8 appendix



8a. glossary of terms

Ability Impaired by Alcohol:
Driving while one's ability is impaired by alcohol or driving with a blood alcohol concentration exceeding 80 milligrams in 100 millilitres of blood.

Class L Driver's Licence:
The learner's licence that allows the holder to drive any motor vehicle that requires a Class G driver's licence (e.g. an automobile) on the road, providing that the holder of a class G licence or any other higher licence class (A, B, C, D, E, and F) is occupying the seat beside him/her for the purpose of giving instruction.

Class R Driver's Licence:
The learner's licence that allows the holder to operate a motorcycle for the purposes of training. Class R licensed motorcyclists are prohibited from nighttime riding, carrying passengers and travelling on high speed highways with the exceptions of Highways 11 and 17.

Conviction:
Awarded when a person pleads guilty to, or is found guilty of, an offence related to a motor vehicle under any Act of the Ontario Legislature or its accompanying regulations, under the Parliament of Canada or any accompanying order, or under any municipal by-law.

Driver:
Unless specified otherwise, any person, whether licensed or not, considered to be in care and control of a motor vehicle at the time of an accident.

Fatal Accident:
A motor vehicle accident in which at least one person sustains bodily injuries resulting in death.*

Had Been Drinking:
Driving after having drunk an amount of alcohol not considered sufficient to be legally impairing or with a measured blood alcohol count of greater than zero but less than 80 milligrams.

Highway:
A common and public highway, street, avenue etc., any part of which is intended for public use or used by the general public for the passage of vehicles and including the area between the property lines.

Kilometres Travelled:
Vehicle fleet mileage is estimated on the basis of taxed gasoline and motor fuel sales. Total litres sold are converted to kilometres travelled based on a conversion factor of 22.08 kilometres per gallon (litre).

Major Injury:
A non-fatal injury severe enough to require that the injured person be admitted to hospital, even if for observation only.

Minimal Injury:
A non-fatal injury, including minor abrasions and bruises, which does not necessitate the injured person going to a hospital.

Minor Injury:
A non-fatal injury requiring medical treatment at a hospital emergency room, but not requiring hospitalization of the involved person.

Motor Vehicle Accident:
Any incident in which bodily injury or damage to property is sustained as a result of the movement of a motor vehicle, or of its load while a motor vehicle is in motion.

Off-Highway Accidents:
An off-highway accident involving any of the motorized vehicles which are covered by legislation under the Highway Traffic Act, the Motorized Snow Vehicles Act, and the Off-Road Vehicles Act.

On-Highway Accidents:
A motor vehicle accident which occurs on the highway, between the property lines.

Pedestrian:
Any person not riding in or on a vehicle involved in a motor vehicle accident.

Personal Injury Accident:
A motor vehicle accident in which at least one person involved sustains bodily injuries not resulting in death.

Property Damage Accident:
A motor vehicle accident in which no person sustains bodily injury, but in which there is damage to any public property or damage to private property** including damage to the motor vehicle or its load.

Reportable Accident:
Any fatal or injury accident, or any accident in which there is any damage to public property or damage to private property in excess of a monetary value prescribed in law.**

Suspension:
Withdrawal of a driver's privilege to operate a motor vehicle for a prescribed period of time.

*Prior to January 1, 1982, fatal accident statistics included deaths attributed to accidental injuries up to one year after the accident. Since that date, only deaths from injuries within thirty days of the accident have been included.

**The minimum reportable level for private property damage accidents rose from $200 to $400 on January 1, 1978 and rose again to $700 on January 1, 1985.

8b. ministry of transportation and communications highway safety publications

Driver's Handbooks

The Driver's Handbook
Driver's Manual for Adult New Readers
Motorcycle Driver's Manual
School Bus Manual
Truck and Bus Manual
Recreational Vehicles Handbook
The Bicyclist's Handbook

Driver Instruction

Roadworthy (Textbook, Classroom Teacher's Manual, In-Car Teacher's Manual, How To Drive — Supplementary Textbook)

Drinking and Driving

Drinking and Driving — Smashed (Pamphlet)
C — 19 is Tough ... (Teens and Adult Pamphlets)
Drinking, Driving and the Law (Slide Presentation)
Three For the Road: 1. Power Under Control 2. The Alcohol You 3. No Thanks I'm Driving (Film Trilogy)

Seat Belts and Child Restraints

What You Should Know About Seat Belts (Pamphlet)
Seat Belt (Poster)
Life Is Precious (Child Restraint Pamphlet, Poster)
Protect Your Children (Pamphlet)
Child Restraint Manual (Manual for Educators and Persons Organizing Rental Programs)
Seat Belt-Fairy Car Father (Teacher's Handbook, Comic Book, Decals)
The Human Collision (Film)
Dice In A Box (Film)
Life Is Precious — Buckle Them In (Film)
Citizen Seat Belt (Film)

Motorcycles

Ontario Motorcycling Facts (Pamphlet)
All Those Who Like To Ride ... (Drinking and Riding Poster)

School Vehicles

School Bus Stopping Law (Pamphlet, Poster)
Driver Improvement Course for School Bus Drivers (Instructor's Manual, Test Sheets and Papers)
School Bus Drivers Have A Big Responsibility (Folder, Pamphlet)
How We Ride (Colouring Book, Poster)
Duties of Patrollers (Folder)
Sam the Safety Duck — On the Buses (Pamphlet, Film, Decals)
Death Zones (Film)

Off-Road Vehicles and Motorized Snow Vehicles

1984 Ontario Off-Road Vehicle Statistics (Pamphlet)
1984/85 Ontario Motorized Snow Vehicle Facts (Pamphlet)

Bicycles

Bicycle Safety Program (Instructor's Manual, and Supplies)
Sam the Safety Duck — Bicycle Safety (Film)

General

Good Driving Practices (Pamphlet)
Guide for Disabled Drivers (Pamphlet)
Pedestrians (Pamphlet, Poster)
Senior Citizens (Pamphlet)
Winter Driving Tips (Pamphlet)
Sam the Safety Duck — On Winter Safety

NOTE: For copies of any of this material contact:

MTC
Public and Safety Information Branch
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8
416/248-3501

Project Co-ordinators	Barbara J. Sorbara David Duncan
Project Advisor	Sharon Bagnato
Designer	Ernst Barenscher

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Ministry of
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Downsview
M3M 1J8
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